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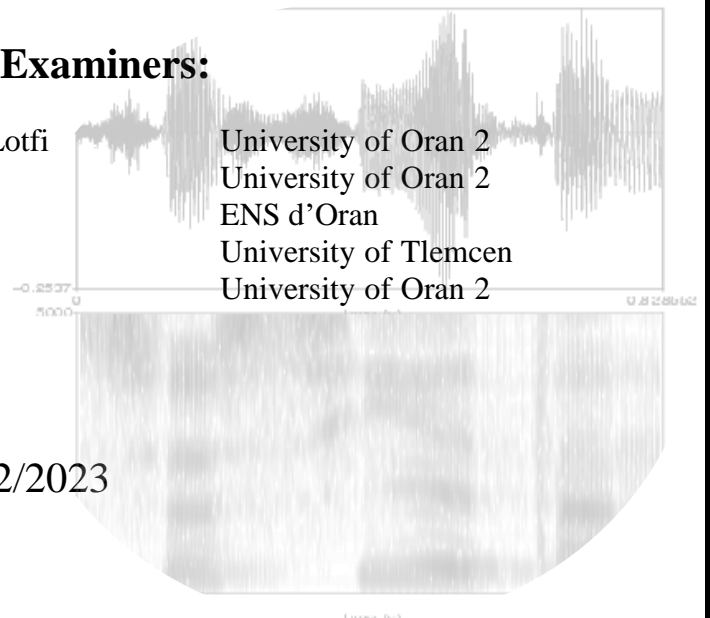
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Degree of Doctorate in Linguistics and Contact languages.

The Effects of Prosodic Features on Algerian Students'  
Pronunciation of English and their Improvement:  
Toward a Didactic Proposal

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## **Declaration**

I, hereby, certify that this thesis is an original work and I am the sole authors of it. I also attest that the work has not been published before nor has it been submitted for previous application in a degree.

## **Dedication**

*To my loving parents, Abed and Labdia Belhoum, who taught me that everything is possible with genuine willingness and hard work.*

*To my beloved Children Iliana and Iyed*

*And,*

*To my husband Yazid and my sister Lydia for their support and special sense of humour which helped me overcome setbacks and stay focused during my studies.*

## **Abstract**

The present study deals with the RP English intonation produced by EFL Oranee learners (a variety of the Algerian language). The research seeks first to describe the English intonation of those speakers in terms of tone choice when producing declarative questions during their read speech. Yet, before conducting this study, the intonation features of the interrogative tones of the Algerian Oranee dialect in the same context will be described, with the goal of providing a basic characterization of it. Next, the research concentrates on testing the efficiency of two teaching intonation methods; a distracted imitation technique versus phonetic awareness through multimedia. The results of the pre-test recordings show that a rising melodic contour in the last stressed syllable of the final word is produced in Arabic declarative questions. It also proves that the informants produced English declarative questions using a compulsory rising terminal contour above 30Hertz. The post-test recordings reveal that the Oranee EFL learners improved their performance after both trainings. Therefore, distracted imitation learning and video awareness based on explanations are efficient in learning English pronunciation. However, the efficiency of imitation is constrained by other factors.

**Keywords:** Declarative questions, distracted imitation, intonation, phonetic awareness, pronunciation, suprasegmental features.

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## **List of abbreviations and Acronyms**

**AA:** Algerian Arabi

**CA:** Classical Arabic

**CLT:** Communication Language Teaching

**EFL:** English as a Foreign Language

**ELT:** English Language Teaching

**ESL:** English as a Second Language

**FLA:** Foreign Language Acquisition

**MSA:** Modern Standard Arabic

**ORD:** Oranee Dialect

**RP:** Received Pronunciation

**SA:** Standard Arabic

**SLA:** Second Language Acquisition

**SLT:** Situational Language Teaching

**TEFL:** Teaching English as a Foreign Language

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### List of Diacritics and Suprasegmentals

Symbols	Examples
' Primary stress	Perfect / 'pɜ:fɪkt/
, Secondary stress	Photograph /'fotə ,gɪæf/
: Length	/a:/
̃ Nasalized	/ẽ/
ʕ Pharyngealized	/tʕ/

### Standard Arabic Phonemes (IPA)

Consonants			Vowels		
Arabic Script	IPA symbol	Transliteration	Arabic Script	IPA symbol	Transliteration
أ - الهمزة	ʔ	ʔ	ا	a:	a:
ب	b	b	ي	i:, e:	i:, e:
ت	t	t	و	u:, o:	u:, o:
ث	θ	th	فتحة	a	a
ج	ʒ	j	كسرة	i	i
ح	ħ	H	ضمة	u	u
خ	x	x			
د	d	d			
ذ	ð	dh			
ر	r	r			
ز	z	z			
س	s	s			
ش	ʃ	ch			
ش	tʃ	tch			
ص	sʕ	S			
ط	tʕ	T			
ض	dʕ	D			
ظ	ðʕ, zʕ	DH, Z			
ع	ʕ	ʕ			
ف	f	f			
ق	q	q			
ك	k	k			
گ	g	g			
ل	l	l			
م	m	m			
ن	n	n			
ه	h	h			
و	w	w			
ي	j	y			
v	v	v			

### Standard French Phonemes ( IPA)

Consonants		Vowels	
/b/	bateau /bato/	/a/	année [ane]
/d/	de /də/	/e/	été /été/
/f/	femme /fam/	/i/	ici /isi/
/k/	que /kə/	/o/	aucune /okyn/
/l/	le [/ə/	/u/	ouverte /uvɛʁt/
/m/	même /mɛm/	y	unique ynik
/n/	bout /bu/	ø	Europe øʁɔp
/p/	peu /pø/	œ	œil œ:j
/s/	si /si/	ɔ	homme ɔm
/t/	tamis /tami/	ə	-
/v/	vous /vu/	ɛ	elle ɛl
/z/	zone /zo:n/		
/g/	gauche /go:ʃ/		
/ʁ/	roue /ʁu/		
/ʃ/	chef /ʃɛf/		
/ʒ/	jamais /ʒamɛ/		
/dʒ/	Djibouti /dʒibuti/		



/tʃ/	tchèque /tʃɛk/
------	-------------------

### Standard British English Phonemes

Consonants			Vowels		
/b/	by	/baɪ/	æ/	ant	/ænt/
/d/	dye	/daɪ/	/e/	end	/end/
/g/	goo	/gu:/	/ɪ/	ink	/ɪŋk/
/m/	my	/maɪ/	/ɒ/	ox	/ɒks/
/n/	nigh	/naɪ/	/ʌ/	up	/ʌp/
/p/	pie	/paɪ/	/ʊ/	pull	/pʊl/
/t/	tie	/taɪ/	/ə/ (schwa)	about	/ə'baʊt
/r/	rye	/raɪ/	/ɑ:/	aardvark	/'ɑ:dva:k/
/k/	coo	/ku:/	/ɜ:/	earl	/ɜ:l/
/tʃ/	chew	/tʃu:/	/ɔ:/	awe	/ɔ:/
/f/	few	/fju:/	/u:/	ooze	/u:z/
/dʒ/	jaw	/dʒɔ:/	/i:/*	eel	/i:l/
/l/	law	/lɔ:/	/ju:/*	union	/'ju:njən/
/s/	sue	/su:/	/eɪ/*	aim	/eɪm/
/v/	view	/vju:/	/aɪ/*	ice	/aɪs/
/z/	zoo	/zu:/	/əʊ/*	oath	/əʊθ/
/h/	who	/hu:/	/aʊ/	ouch	/aʊtʃ/
/ŋ/	ring	/rɪŋ/	/ɔɪ/	oyster	/'ɔɪstə/
/ʃ/	fission	/'fɪʃən/	/eə/	air	/eə/
/ʒ/	vision	/'vɪʒən/	/ɪə/	ear	/ɪə/
/θ/	thigh	/θaɪ/			
/ð/	thy	/ðaɪ/			
/w/	well	/wel/			
/j/	yell, union	/jel, 'ju:njən/			

# **General Introduction**

“English Proficiency: Algeria ranked 90<sup>th</sup> out of 100 countries.”

This title was given to an article published in 2019 by the Algerian online newspaper the “Algérie Eco.com” representing the Algerian’s poor level of English proficiency. This was shown empirically by various research examples, among them, a study carried out by Education First, which analyses and provides results of 2,3 million of people who passed their English test. And annually presents world English proficiency rankings using the English Proficiency Index (EPI). Recently, between 2019-2020, it was shown that Algeria has obtained a score of 45,28 points out of 100, which ranked it among the category of countries with “a very low English competence”. This score is lower than the one obtained by countries such as Afghanistan (89<sup>th</sup>), Syria (82<sup>nd</sup>), Qatar (80<sup>th</sup>) or Turkey (79<sup>th</sup>), (Mehenni, 2019). The reason behind these results is clearly justified in the realm of second and foreign language learning/teaching. The origins of this lack might be due to the way Teaching English as a Foreign language (TEFL) was approached and dealt with in Algeria. In fact, In the 1950s and 1960s, TEFL was primarily pedagogical, using teacher-based approaches and inductive learning methods to make grammar the foundation of speaking (Richard Hudson & John Walmsley, 2005). In other words, teachers built their syllabus upon traditional methods where grammar rules and vocabulary were the centre of interest in classes. Yet, recent studies in applied linguistics discovered that those methods are not very productive. On the contrary, traditional or transformational grammar has no influence on second and foreign language growth (Lamb and Wyllie, 2006). Thus, grammar is considered as peripheral in learning a language. Its fundamental function is to help us consciously correct ourselves when reading and writing. If ones try to apply/reproduce this aware process of correction in real time conversations, it will make the process of speaking complicated. It can be assumed that language learning and a successful communication

come without the necessity of knowing and using consciously grammatical rules. Yet, it requires social and linguistic patterns. In fact, the difficulties that English learners face are particularly blatant when it comes to the pronunciation and the perception of English (Jacquemot and Scott, 2006; Ohata, 2006). If we take Algeria as a case study, learners tend to transfer their native phonetic and phonological system to their target English production. Among the various errors at the segmental level, GhlamAllah (2018) assumes that Oranee students of English lack in making the distinction between the minimal pairs /i/ and /i:/ in their oral English productions.

At the suprasegmental or the prosodic level (Stress, intonation, rhythm, and quantity), Algerian learners of English tend to end their declarative utterances with an insufficient falling tone resulting with an unfinished speech impression. Consequently, it alters the naturalness and fluency of their production.

Algerian learners' fluency difficulties in oral speech is obviously related to the teaching of English pronunciation. Current studies in Applied Linguistics revealed a growing interest towards learning a foreign language phonology and its impact on the communicative competence of learners. Various research experiments tried to discover whether teaching pronunciation helps improve learners' speaking performance, in addition to finding methods which can help them learn easily and efficiently. Most of the results of those studies were conclusive (Touhami, 2016. Bengrait 2019. John Levis and Sinem Sonsaat, 2017).

This shift of focus towards teaching pronunciation and the suprasegment features encouraged the application of instructional tools as computer programs in teaching those aspects of language. Yet, few experimental works on modern teaching methods using online tools were conducted in the Algerian territory. As a result, the elaboration of this thesis was made to answer several research questions in relation to teaching and

learning pronunciation, and more precisely, intonation by Oranee students in an online context.

The present study deals with the RP English prosodic feature: intonation produced by EFL Algerian learners. More precisely, it concentrates on speakers of Oran dialect, which is a variety of Algerian Arabic. The research seeks first to describe the English intonation of those speakers in terms of tone choice when producing declarative questions during their read speech. It, therefore, provides a comparison (similarities and differences) between the Standard British English F0 movements of the interrogative focus in declarative questions and those produced by Oranee English users. Yet, before conducting this comparison, the intonation features of the interrogative tones of the Algerian Oranee dialect in the same context will be described, with the goal of providing a basic characterization of it.

The last part of the thesis aims at testing the efficiency of two pronunciation teaching methods involving Wrembel's framework: the audio-visual explanations versus the distracted imitation amongst Oranee learners of English in learning English declarative questions. Thus, testing the efficiency of learning pronunciation in an online context.

It should be noted that the whole examples cited in this thesis respect the Leipzig Glossing Rules (2015) which are standard set of conventions that linguists can refer to. Thus, the research adheres to these rules to write the glosses in order preserve the coherence of the manuscript when explaining examples. The objective of this peculiar glossing rules is to permit foreign reader understand the cited examples without the necessity of speaking Arabic.

The reason behind the choice of the interrogative terminal contour in declarative context is that the Oranee dialect is characterized by a peculiar prosodic configuration

of the interrogative focus which makes it distinct from the other Algerian dialects. In fact, Oranee speakers tend to produce a melodic rise in their final syllable, while those from Algiers produce a falling tone in the final syllable, forming a bell on the last word Benali (2015). Therefore, it would be interesting to compare the production of Oranee speakers with the one of the native British English Speakers. And see whether this distinctive feature, specific to the Oranee dialect, influences their English pronunciation and production.

The first purpose of this research work is to describe the Oranee dialect intonation. More precisely, it provides a characterisation of the used melodic contour to express declarative questions in read speech. The aim and the results of this first step will allow conducting the comparison between the production of English intonation by British English users and non-native Oranee learners of English. Finally, the second part of the research concentrates on testing the efficiency of two teaching intonation methods: a distracted imitation task versus the visualization of a video with an instructor explaining the articulatory features of declarative questions. Thus, the study raises the following questions:

1. To what extent motivation can impact students' pronunciation learning?
2. What are the prosodic features (namely F0 movements of the interrogative contour in declarative questions) of Oranee English intonation in read speech?
3. What are the differences and similarities of Standard English intonation and Oranee English intonation in terms of terminal pitch movements of declarative questions? In other words, what does characterise this non-native intonation of English in this context?
4. Are there any factors influencing the intonational production of Oranee learners?  
(Mother tongue: Oranee dialect, or Second language: French)

5. Are videos and awareness raising with the help of hand gestures as efficient as imitation regarding the acquisition of English declarative questions for Oranee learners?

In order to achieve the research objectives, a descriptive research procedure was first implemented to afford a characterisation of the F0 movements of the interrogative contour in declarative questions of Oranee English intonation. The last question related to the efficiency of the aforementioned learning methods in learning those intonational aspect of declarative question was tackled using micro qualitative experimental research procedure.

The actual work is divided into seven chapters. The first part comprises five chapters which permit to establish a theoretical framework related to our research questions. As a matter of fact, the first chapter explains the process of learning a foreign language and the difficulties a learner faces compared to acquiring a first language. The aim of this chapter is to understand those natural and predisposed human parameters to help learners overcome those challenges.

The second chapter introduces English pronunciation in the domain of English as a second language (ESL) and English as a foreign language (EFL) teaching. It outlines the status and role of pronunciation throughout time, explaining the reasons why it always has been neglected at schools and universities, showing the impact of the lack of pronunciation on the development of English for foreign learners. Finally, it seeks to explain what is meant by RP pronunciation and what are its components; segmental and supra-segmental aspects.

The next chapter provides an overview of two learning and teaching techniques to be implemented in the present research. It describes the role of imitation as an instruction method, tackling the use of mirror neurons and motor responses in learning. In addition,

it tries to illustrate the difference between the aforementioned method with the audio-visual one which involves learners' phonetic awareness which is closely related to the cognitive theory of multimedia.

Chapter four proposes a theoretical background to understand the RP English intonation. In fact, the main objective of the research is to investigate the behaviour of RP intonation when produced by Oranee students. Therefore, this section presents the function of intonation in relation to intelligibility and language comprehensibility. Then, a short description of declarative questions is presented, since the whole study is based on this kind of interrogative statements. Finally, melodic contour categories are defined in order to define a model for the research prosodic analysis.

It also provides a linguistic background of the targeted language variety used in this research (Chapter 5), which is the Oranee dialect. First, it details the difference between Classical, Modern Standard and Algerian Arabic. The reason behind it is to restrict the research to only one variety, which has peculiar linguistic parameters and characteristics. In addition, Standard Arabic intonation is described in order to distinguish it from the one of the Oranee dialect. The last point discussed in this part is the status of the French language as a second language in Algeria, to attest whether it has an impact on the informants' English realisation. It also provides a description and a comparison between the Algerian Arabic phonetic inventories.

The sixth chapter regroups the experimental study and research methodology used to fulfil the thesis objectives. It aims at answering the research questions mentioned above by following a particular research methodology. The first section presents the participants or informants who took part in the study, in addition to the material and the research corpus. The aim of the first section is to afford a description of the prosodic features of Oranee English intonation in read speech and the factors influencing the



intonational production of those speakers, as well as illustrating informants' motivation in learning pronunciation. It also provides the used methodology for conducting a micro qualitative experimental research procedure which tackles the efficiency of two teaching intonation methods involving Wrembel's framework: a distracted imitation task versus the visualization of a video with an instructor explaining the articulatory features declarative questions. Results and discussions are highlighted in the last chapter

The implication of the study is to provide significant data and results which can help interpret, deal and predict possible communication difficulties and problems that EFL Oranee learners may face when learning English pronunciation, notably English intonation. In fact, little experimental studies on intonation are currently available. The research will be of great benefit for both Algerian students and teachers, so far, the poor relation in ELT in Algeria. Effectively, this work allows discovering and managing the gaps of those EFL speakers in order to avoid communication frustration and achieve intelligibility. In addition, it proposes modern and effective learning methods to be implemented in EFL classes.

## **Chapter I: Learning a Foreign Language**

## **Introduction**

Learning a foreign language is not an easy task for learners especially when the targeted language is not an official language spoken in the environment where they live. Moller (2015) defines it as: “A language is considered foreign if it is learned largely in the classroom and is not spoken in the society where the teaching occurs”. This is exactly the case of Algerian learners where English is represented as a non-native language which is not spoken naturally in Algeria, yet it is taught in the classroom. Therefore, Algerian learners are lately exposed to it (When starting middle School; between 11-12 years old). This situation leads generally to learning difficulties. The question that one might ask is: *why is it difficult for adults to learn a foreign language?*

Few learners succeed to master their L2 or foreign language similarly as they do with their mother tongue, especially when it comes to perceive or produce the pronunciation of the targeted language. The present chapter tries to afford answers; based on literature, to understand the nature of those difficulties. More precisely, it tries to illustrate the factors that complicate the acquisition of those language competence. The aim of it is to find solutions that can help those learners achieve intelligibility and comprehensibility.

### ***1.1. Foreign Learners’ Biological Constraints***

“Languages come naturally to young children because their minds are like sponges that soak up all the information they can in their environment” (Cook et al., 1979). This quotation sustains that children possess a brain which is different from the one of adult. It means that they are predisposed to acquire naturally a language without making any efforts. Their neurological system is compared to a sponge which absorb input of language. Several researchers have aimed at understanding this natural process by relating age as a fundamental factor influencing the quality of learning a language. They discussed

this issue by referring to it as “the critical period of acquisition” or “the sensitive period”, in which language acquisition depends on a rich input during this time frame (Lenneberg, 1967)

As a matter of fact, researchers observed that the quality of speakers’ performance of their foreign language depends on the age where they started learning the target language (Hernandez and Ping, 2007, Birdsong, 2006, Moller 2015, Penfield & Roberts 1959). They, therefore, concluded that there is a favourable period where acquiring a language is easier. Exceeded that period, acquiring naturally a language would become a real challenge. This sensitive time frame would extend from infancy to puberty, in other words, approximately from 2 to 13 years old. Birdsong (2006) argues that age of acquisition is reliably the strongest predictor of ultimate attainment in the language. These hypotheses are highly related to the neurological development of individuals. Recent discoveries in neurolinguistics and neurobiology sustain that when a learner is early exposed to the targeted language, he/she carries out through the same brain computation devices as those in L1 grammatical processing in his brain. Fledge (1999), resumes the critical period accordingly:

“The observation of age effects on the L2 performance of adults—even those who are experienced in their L2—has suggested to some researchers that the ability to acquire an L2 effectively is limited by a critical period. (...) The critical period hypothesis rests on the assumption that the age-related effects seen in L2 studies are the result of maturational changes in brain structures that are used to learn and/or to process language. For example, it has been hypothesized that as the brain matures, it becomes less “plastic” and that lost neural plasticity impedes L2 learning” (p.78-79)

The sentiment embodied in this quotation is that proponents of the critical period approach strongly affirm that this time frame is fully connected to the biological and cerebral development of learners. According to those scientists, the evolution of the neurological and neurophysiological aspect of learners' brain occurring during their growth (exceeding the critical period) are responsible of the loss of their brain plasticity and consequently, their ability to learn a foreign language. Long (1990). Therefore, the brain is no more able to create new connections which make it impossible to learn new language competences.

However, this neurolinguistic hypothesis is not shared by all researchers. Some opponents argue that even after the sensitive period (After their teenage year), adults are able to produce neurological connections permitting learning a new language. Yet, this ability decreases through time until it disappears, explaining the difficulties adult learners face when learning a foreign language.

We, therefore, assure according to literature that there are age constraints that must be taken into consideration as far as learning English as a foreign language is concerned. These constraints are particularly blatant when it comes to learning the pronunciation of a language. It is important to note that pronunciation is the most challenging aspect in language learning. Birdsong (2003) assume that it is infrequently occurring that adult learners succeed in learning the phonetic and phonological system of a foreign language as well as acquiring a perfect pronunciation perception and production. Actually, birdsong (2003) conducted a study where he found that learners' performance in pronunciation is worse compared to linguistic and syntactic productions. "The critical period for grammar may be later than for pronunciation (around 15 years). Some adult learners; however, may succeed in acquiring native levels of grammatical accuracy in speech and writing and even full linguistic competence" (Tohidian 2009, p.12)

It is also important to notice that children acquire rapidly the ability to produce and preserve their mother tongue; therefore, as they achieve their adult age, they struggle in learning new segments, especially, those who do not always correspond to the ones in their mother tongue.

In the next section, we will discuss the impact of an existent phonological system when learning a foreign language. This might create a conflict between neurological connection which slows down learning, or completely stops it.

### ***1.1.1. The Existence of a Pre-set Phonological System***

Chomsky (1959) claims that children are biologically predisposed to learn a language and have an innate ability to discover, understand and acquire the underlying rules of a language system. As a matter of fact, they easily assimilate the input of their environment and store it in their brain. Consequently, these language skills are registered as they grow, blocking the possibility of learning another language, since the plasticity of their brain is no more functional.

The existent of this phonological system makes it complicated to learn an additional language. This point is sustained by Celce-Murcia et al. 2001 who argues that: “The acquisition of the new sounds in the second language must be integrated into already existing neural networks.”

Learning a foreign language leads to the coexistence of various systems which might cause problems for learners as language interference. In fact, we can observe that learners tend to use their phonological system unconsciously when exposed to another language.

Language interference, also known as language transfer, refers to the use of a previously existing or acquired structures when using a second or a foreign language.

Fledge (1992) explains: “When adults encounter an L2 word, they attempt to "decompose" it into the phonemic units of the L1, and then produce the L2 words as if it consisted of phonemic elements (allophones, morphemes) from the L1. (p.565)

It is important to note that this interference process affects both the segmental and suprasegmental aspects of pronunciation. Learners tend to use their L1 segmental system when facing situations where L2 segments do not exist in their mother tongue. We can explain this behaviour by the fact that learners perceive a foreign sound and try to decompose it and match it with their segmental system. Fleg (1987, 2005) refers to it as “The Merge Hypothesis”. He argues that: “the merging of phonetic properties of phones that are similar in the L1 and L2 can potentially impact not only the acquired language but the native one as well”

The same phenomenon occurs with the production of the prosodic aspect of language. Learners tend to count on their L1 prosodic system to produce their target language which creates- accents. Nguyen (2008) conducted a study with Vietnamese informants producing English, where he found that learners tend to use their intonational system to perceive and produce English. Several studies have also proven this tendency among foreign learners.

Having considered the negative aspect of language interference in learning a foreign language, it is now reasonable to discuss the positive transfer which is supposed to facilitate L2 and foreign language learning phonemes and prosodic structures. Yet, this process can occur only under certain conditions. In fact, a positive transfer might be beneficial only when the L1 and the acquired language share the same linguistic elements. (Rasier and Hiligsmann 2007).

Opponents of this aspect of positive language transfer assume that it restricts learners by preventing them creating two distinct systems with different phoneme and prosodic structures. Peperkamp & Dupoux (2002) name this process as the deafness phenomenon. They argue: “The term ‘deafness’ is meant to designate the effect of listeners having difficulties in discriminating non-words that form a minimal pair in terms of certain non-native phonological contrasts, be it segmental or suprasegmental” (2002: 203). Therefore, it can be assumed that the degree of difficulty in acquiring a foreign language is closely related to the degree of similarities between L1 and L2 or foreign language. Lord (2008) observed in his study that English learners of Spanish form a hybrid system by merging their languages. In other words, he observed that not only L2 is influenced by L1, but also L1 is influenced by L2. In fact, he discovered that their Spanish production comprised English language characteristics. In addition, their English production was judged to be native like compared to monolingual speakers of English.

### ***1.2. Cross Linguistic Transfer: The Case of Oranee Learners of English***

Language transfer, also called *interference*, is a well-known phenomenon that occurs in the domain of second and foreign language acquisition. When learners face difficulties in producing or perceiving the target language, they will automatically draw on their already set language reservoir or system and rely on their mother tongue. Therefore, learners tend to transfer not only their L1 phonology, grammar, vocabulary, meaning, but also their culture when speaking the language. As a result, errors are made, and their frequency is highly related to the similarities and differences between the target language and the mother tongue (see the above section). Vidigal, Pereira & Augusto (2013) said: “Schachter (1993) explicitly frames language transfer as part of the L2 learner’s process of building and testing conscious or unconscious hypotheses about the target language” (p.3). This quotation means that learners who communicate in their target



language may rely explicitly or implicitly on their L1 knowledge. When those borrowed L1 information coincide with the form of the target language, facilitating communication, it is then referred to as “positive transfer”. However, when the used L1 input does not match with the one of 2, it is considered as “negative transfer”.

If we take the example of Algerian learners’, Sassi, Keitab & Gueitaf (20) conducted a study where they explore the influence of Algerian EFL learners’ French (L2) level on their English (L3) proficiency. They concluded that:

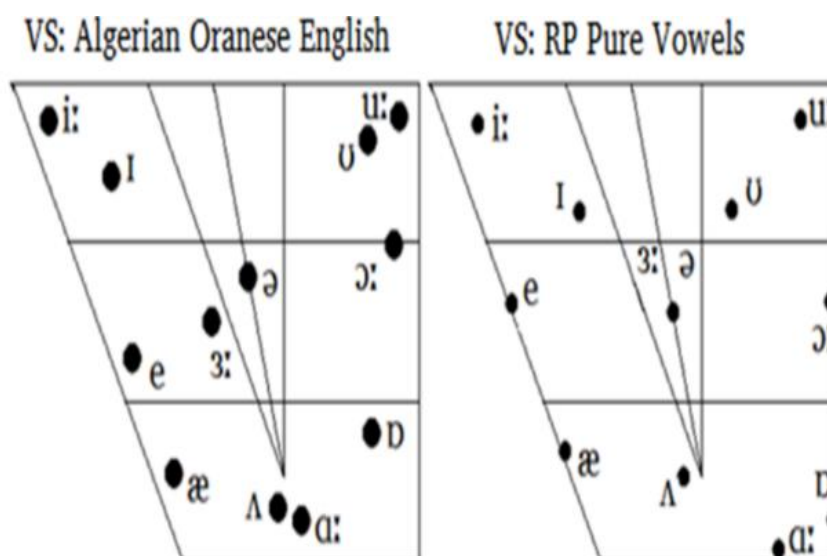
“Positive influence of L2 on L3 can be, cautiously, explained by similarities (typologically similar structures rather than historical closeness between French and English in comparison with Arabic) and the high activation of French due to the contextual factor which can stimulate the learner and raise the potentiality of a transfer.” (p.11)

On the other hand, when the transfer is negative, several errors are produced by Algerian learners. GhlamAllah (2018) assumes that Oranee students of English lack in making the distinction between the minimal pairs /i/ and /i:/ in their oral English productions. They therefore, use what is already available in their phonetic system (L1 and L2) and apply it to their L3 production. She argues that:

*The distinction between the front short and long vowel in ship/sheep is not noticed, so words having /i/ or /i:/ are generally produced with [i]. The same realisation for both words is quite common since Arabic uses length mainly as a contrastive element in grammar... Words having /ʌ/ such as*

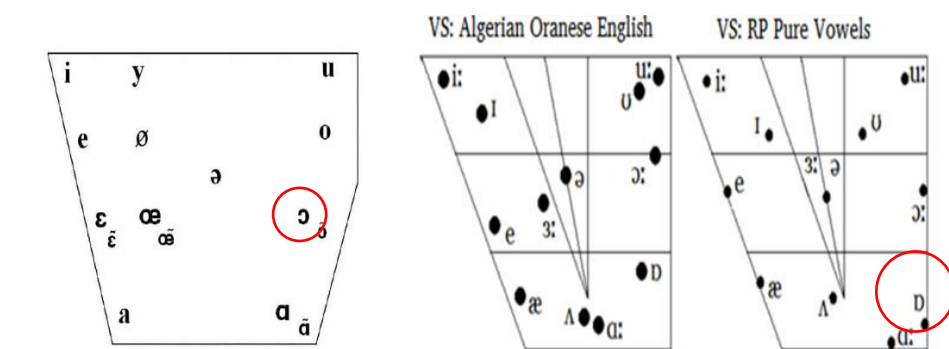
*money are either realised with [a] if the transfer is from Arabic or [o] if the transfer is from French. (p.7)*

In fact, the Oranee English vowel system is different from the one of RP English. These differences are due to the fact of getting close to the mother tongue vocalic system. The following picture represents the differences and similarities between the Oranee English vowels and the RP ones



**Figure 1:** Ghlamallah (2018) Comparison between Colloquial Oranese English and RP Vowels. (p.8)

The above graph clearly shows that Oranese English vowels are closely similar to the ones used in French. It can be explained by the fact that they share the same alphabet (Latin spelling). You can see in the below graph, the representation of the French vocalic system, which is unlike the English one, forms a trapezium. Thus, it is clear that from the figure above that Oranee tries to imitate the vowel French vowel /ɔ/ when producing the English vowel /ɒ/ like in /dɒg/.



**Figure 2:** Comparison between Collquial Oranese English, French and English Vocalic Systems.

To conclude, it was important to tackle the impact of cross linguistic interference in learning English as a foreign language. In this research, we will try to identify those interferences in terms of tone choice in declarative questions.

### 1.3.Motivation as a Learning Factor

In the previous section we have discussed the various possibilities which might influence the learning process of a second or a foreign language. However, they are not the only factor which determine the possibility of learning an additional language or not. There are, in fact other significant elements which drive learning, among them motivation.

Learning a foreign language requires an internal process, referred to as “motivation”, said differently and in simple words, it’s the fact of willing and wanting to achieve an objective. Gardner (1985) describes core second language learning motivation as a construct composed of three characteristics: the attitudes toward learning a language (affect), the desire to learn the language (want) and motivational intensity (effort). In other words, a highly motivated learner will have the desire to learn a language as well as enjoying the process of learning it.

In fact, the key element in learning a language requires learners' full interest in their learning process. Dörnyei (1998) shows the importance of motivation and makes it clear by saying "Without sufficient motivation, even individuals with the most remarkable abilities cannot accomplish long term goals." (p. 117)

The argument discussed in the above quotation is proven in various research works. Actually, Liuoliene & Metiuniene conducted a study where they evaluated the motivation of a group of English learners and the impact it had on their learning efficiency and progress. They discovered that those informants have a strong consideration for their English pronunciation improvement; consequently, succeeded in achieving a native like pronunciation. They discovered that:

"Statistically significant correlation between learners' motivation and the sense of responsibility was found ( $p = .000$ ;  $r = .646^{**}$ ). Statistical significance between learning motivation and students' need for autonomous studies was established with the help of ANOVA ( $p = .02$ ;  $r = 3.742$ )" (p.12).

If we compare the motivation of L1 and L2 learners, we can notice several differences which once again explain why it is more complex to develop language competence in L2 or foreign language. It is known from literature that the motivation which guides children to learn a language is the need to assimilate in an environment; therefore, it becomes vital to communicate with his community in order to integrate and fulfil his desire to be known in his environment and become a non-distinctive member. However, adult learners' motivation is more instrumental. In other words, they already master a language (L1), consequently, they will use the additional language as an

instrument to fulfil an objective; it might be professional for example. (Schumann 1975, Celik 2012, Barletta 2012).

It can be concluded that the type of motivation as well as the degree of the latter are fundamental in language learning, especially in acquiring pronunciation and becoming a native like speaker. In the next section, we will discuss the importance of exposure to a language in this complex human process.

#### **1.4. Anxiety and Pedagogical Implications**

It is widely known that emotion and feeling plays a fundamental role in the fulfilment of our objectives and in perceiving our everyday life. Human beings use emotions to communicate with others as well as with their own selves. These emotions, positive or negative, will directly influence their decisions and consequently their intellectual capacities.

Research in applied linguistics discovered that personality traits like risk taking, self-esteem, anxiety are considered as factors which might influence the mastery of a foreign language (Dörnyei, 2005). In fact, in the domain of language acquisition, emotions: notably, anxiety, has a strong hold sway on learners' production and language performance.

Before considering the consequences language anxiety has on SLA and FLA, it is important to look first at its definition. To start with, Spielberg (1983) defines anxiety as “the subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the nervous system.” (p.1). It has traditionally been conceptualized with a psychological construct, which is indirectly related to the fear of something. There are two types of anxiety: general and specific. When it is associated with only one situation of object for example speaking a foreign language; thus, it is called specific anxiety.

However, when an individual is constantly anxious it becomes pathological and represented as a generalised anxiety.

Anxiety when related to the domain of language learning, is called “second/ foreign language learning” and considered as specific anxiety. In fact, it is when students display less-self-confidence and relate their negative emotional reactions to language acquisition

It is important to note that it has the same clinical characteristics as any other type of anxiety. Those symptoms are fear, palpitation, sweating, freezing, forgetfulness, voice change etc, that lead to language difficulties that create skill deficits and communication blockage (Horwitz &Cope, 1986). Unlikely, children don't have this kind of negative emotion when learning their L1. They do not pay attention to external factors, such as people judgement, exams, oral test or simply, the fear of making mistakes. Therefore, anxiety strongly correlates with the success of learning an additional language. Eysenck (1979) (as cited in Sorádová & Kráľová) explained that: “the negative effects of anxiety in FL learning saying that anxious people divide their attention between task-related cognition and self-related cognition, making cognitive performance less efficient” (p.4).

This emotion may touch other aspect of learning. Researchers turned their attention to the consequences anxiety may have on learners' performance in the four language skills, listening, speaking, reading and writing. Scarcella & Oxford (1992) observed that: “anxiety can be detrimental to L2 listening performance when learners believe they must understand every word they hear”(p.4).

It has been found that anxiety has a significant impact on foreign language acquisition and performance. Consequently, a great number of researchers tried to find strategies and a pedagogical environment to overcome this challenging issue.

The most important point to sustain is the fact of feeling confident in the classroom. Teachers must create an environment where learners' feel supported and accepted when speaking their additional language. Programs should be emphasized on communication training in respect to learners' performance. Making mistakes should be a part of a pedagogical program, since it helps students correct and improve themselves. Anxiety awareness courses should be displayed in the classroom, explaining to learners how to avoid it, how to deal with it and how to overcome it. In fact, understanding the mechanism of anxiety may help some people. Dewaele (2018) found that enjoyment plays an important role in channelling learners' negative anxiety.

### **1.5. Language Exposure in Learning Pronunciation**

Many studies have related the importance of exposure in learning an additional language. Thus, it can be regarded as a fundamental element for learners to develop their language and master its structures, especially its phonological and phonetic characteristics.

To start with, exposure can be defined as "the contact that the learners have with the target language that they are attempting to learn" (S,M, Al-Zoubi 2018:152 ). Benson (2001) defined it as "any kind of language learning that takes place outside the classroom and involves self-instruction, naturalistic learning or self-directed naturalistic learning (p134). Therefore, exposure involves, listening to the target language and using it in real life situations anywhere and at any time.

Concerning learning pronunciation, literature suggests three major elements which can play an important role in the potential success of learning a good perception and production of pronunciation.

- Age of onset: Age at which the learner is exposed to the targeted language for the first time. (Moyer, 1999)
- The period of exposure ( Derwing, 2008)
- The quality of the input when exposed to the language. (Celce-Murcia et al., 1996)

Considering the first point, age at which the learner was exposed for the first time determine consequently the quality of his learning and his intelligibility. Proponents of this viewpoint argue that exposure facilitate learning. As a consequence, learners exposed precociously tend to acquire and master pronunciation better than those who were lately exposed (Moyer, 1999). We can relate this idea to the plasticity of the brain mentioned in the previous section (Biological constraints). Piske et al argue: « The more fully developed the L1 system is when L2 learning commences, the more strongly the L1 will influence the L2. » In fact, a young child will undergo less neurobiological modifications and will not merge his L1 system with the one of his target language.

However, it should be noted that only exposure is not sufficient to achieve a good pronunciation and mastering a language. The quality of the latter is compulsory. It means that learners must be exposed regularly and intensively to the language. Thus is important to tackle the second point related to the amount of time exposed to the target language.

Zhang et al argue that:

“Exposure, it is difficult to define (Brown, 2007). Generally, it relates to the length of time that the learners live in a target language environment. It does not matter the place or country the learners stay, but depends on how much they use English in their daily life. The



more they spend their time for listening and speaking English, the better their English pronunciation will be. (Zhang et al., 2009 ; 45

The quality of the input is a fundamental element in learning pronunciation. In fact, the lack of exposure is a serious problem for learners which leads to learning difficulties and bad results. Moyen (2008) assumes that even though a learner lives in the country of his target language, it would not be sufficient without the quality of the input. The lack of exposure of a quality input can lead to damaging results. Flege (2012 : 8) : « In my view, the kind and/or quality of input is the single most important factor affecting nativeness of L2 segmental production and perception ».

### **1.6.Conclusion**

Some researchers in the field notice that the majority of teachers are not native speakers of the language they teach and; therefore, influence their learners performance. They assume that teachers themselves may make mistake and teach them to their learners. Let's take the case of French speakers of English. French native teacher might not acquire some phonemes of English and expose their errors to their learners. Consequently, those speakers learn a foreign language having as an input the productions of speakers who are not native speakers. This process also affects pronunciation. Learners receiving a foreign pronunciation input of a target language, will for his turn develop the same foreign accent. This section highlighted the importance of exposure in learning a foreign language, explaining and the impact of the quality of input in that process.

## **Chapter II**

# **Pronunciation Status and Function in Second and Foreign Language Learning Instructions**

In our daily life, communication is an unseparated element from existence, be it written or oral. In our objective to express our ideas, we use our voice as a material to convey these cognitive and linguistic reactions, which characterise our “speech” that is part of the human identity. In fact, people must be aware that their voice is an important element which construct their identity. It reveals who they are and how they feel. The sounds that individuals make indicate everything about them, their background, their level of education, their ability to understand etc. People make assumptions in the minute one’s opens his mouth. Indeed, the way we speak immediately conveys something about ourselves to people around us, whether we use our mother tongue, a second language or a foreign language. Therefore, pronunciation is an integral part of language with several functions; a badge of identity, a tool of intelligibility and clarity. Language is not only grammar and vocabulary, yet it is a combination of several systems, where pronunciation is also included, and cannot be neglected. Actually, a foreign speaker with a clear pronunciation may be understood better than someone who has a great amount of vocabulary, a perfect grammar and a bad pronunciation. As a result, these kind of learners with poor pronunciation performance may be considered as incompetent learners due to the lack of pronunciation. This fact may lead them to frustration and isolation; in addition, it will affect the development of their English language. Thus, teaching pronunciation is of a great importance and should not be neglected, which is not the case nowadays. Learners and even teachers are not aware of the importance of pronunciation in their speech. As a matter of fact, Gilner writes that “even when included in course books, pronunciation is marginalized and treated superficially” (2008:94). Moreover, the study of pronunciation has been marginalized within the field of applied linguistics and remains marginalized up to now; Derwing and Munro argues: “there is relatively little published research on pronunciation teaching” (2005: 383). These

arguments prove that English pronunciation was neglected from the beginning of teaching English as a foreign language. Consequently, this lack of awareness has influenced teachers, learners, and the development of the English language in foreign countries.

This section of the thesis discusses the ups and downs of teaching English pronunciation throughout history until nowadays, in addition to its role and status in curriculums, schools and institutions. Furthermore, it shows the influence of the lack of pronunciation on foreign learners, and their intellectual development. Finally, the components of pronunciation; segmental and suprasegmental features, are outlined and explained in details, showing which part is neglected and which one is the most important for the intelligibility of speech.

### **2.1. Pronunciation Status and Role in Learning Classes**

In the history of language teaching, pronunciation has occupied an instable status in the area of language teaching. It flourished and was at the head of teaching, yet it slowly lost its notoriety and became a marginal aspect of language. To the point that it was labelled the “Cinderella” of foreign and second language teaching (Kelly 1969)

If we look back at history, with a special consideration to the methods used in second and foreign language teaching, we find that vocabulary and grammar dominated the terrain of study, and teaching pronunciation was largely irrelevant. Linguistics and philologists have given much importance to the ‘cerebral’ part of language, neglecting the physical one, thinking that pronunciation is useless, additional or optional especially in communication.

As a matter of fact, initially, language teaching methods did not recognize the need to teach pronunciation. The primary goal of such approaches was to teach lists of lexis, grammar and practising texts comprehension, yet oral communication was not of

their major objective. A pertinent example would be the 'grammar translation method' (1840s to the end of 1940s). Actually, this way of learning considered that literary language is superior to the speaking aspect of language. The major purpose of this reasoning is to develop the reading and the writing skills of learners. In other words, grammar translation method was created to consider learners' reading and writing difficulties, while pronunciation is completely marginalised.

This point is sustained by the work of Larsen-Freeman who argues: "The primary skills to be developed were reading and writing and, consequently, grammar and vocabulary were emphasised. Speaking and listening were neglected and pronunciation received virtually no attention." (2000:16, 18).

Yet, it has been found that grammar translation method did not meet learners' need; which were practicing their target language in order to achieve intelligibility when speaking. Thus, this learning method was highly criticized starting from the twentieth century.

Consequently, and as a reaction against this method, the 'Reform movement' emerged and bore its fruits. Second and foreign language teaching changed position and attention was paid to the spoken side of language, developing an oral based language teaching methodology. More attention was paid to the Phonetic and phonological aspects of language. They started to be considered as the core of intelligible or accurate pronunciation which lead to a successful language learning. Furthermore, reformers fought for the status of pronunciation in teaching, and they successfully established a place for pronunciation in the instruction curriculum by rejecting teaching methods that did not employ phonetics and phonology. Palmer who was a proponent of this view contributed in the developing of oral methods based on phonetic principles. He argues that teachers and learners should take into consideration the mastery of accurate

pronunciation in the classroom. As a result, extensive trainings that includes phonetic transcription were implemented in language learning syllabus. In fact, Palmer adds: “Systematic exercises in pronunciation should be used, including ear training exercises and exercises in articulation.” (1969:107).

Overtime, other similar approaches were developed in favour of teaching pronunciation of English and other languages in the 1950s, such as Situational Language Teaching (SLT) (1950s and 1960s), and Audio-Lingual Methods. These methods participated in the rise of pronunciation. However, shortly afterwards everything turned upside down, and the status of pronunciation has fallen gradually. Attention was no longer paid to pronunciation, yet everything shifted to lexis, grammar and syntax, especially with the introduction of Chomsky’s works; *transformational-generative grammar* (1965), his theories of *government and binding* (1981) and the *minimalist program* (1995). In addition to Hymes (1972), who introduced the term ‘communicative competence’. As a result, in 1970s the ‘Communicative Language Teaching’ was developed, focusing on teaching process of communication rather than the mastery of language forms. Pronunciation lost its high status and role as an essential component of language teaching. Seidlhofer argues: “class time spent on pronunciation was greatly reduced or even dispensed with altogether.” (2001:57).

Nowadays, pronunciation is marginalized in second or foreign language instructions at the level of universities in practically the whole worlds. For example, in Thailand, it is completely neglected in the program (Wei & Zhou, 2002). In china also, where it is given no place or left to luck in the curriculum. (Cheng, 1998). Furthermore, in the United states, students and teacher think that learning pronunciation is a waste of time. They regard its learning as impossible, especially in distinguishing homophones.

For example, they argue that they cannot make a difference between leach and leech and there is no way that can make it.

To sum up, it has been demonstrated from the above discussion that throughout history the position of pronunciation has undergone several changes, shifting from a high status to a low one. We have also seen that methods of language teaching had a great impact on the role or status of pronunciation. The latter was considered to be the most important part of language teaching in SLT and audio-lingual methods, whereas it was largely neglected in the CLT ones. In the next section of this chapter, we will discuss the factors that influence learners' pronunciation, in addition to the effects of limited knowledge about this important aspect of language which guarantees intelligibility and comprehensibility.

## **2.2. Effects of Limited Knowledge about Pronunciation.**

Pronunciation is definitely an important and an inseparable aspect of language that helps achieve an intelligible communication, avoid ambiguity and misunderstandings. As a matter of fact, limited knowledge of pronunciation may affect the learner's emotions, message and willingness to communicate to improve intellectual, personal and social skills.

To start with, lack of pronunciation may cause obstacles to successful interactions which affect emotionally and psychologically the speaker as well as the hearer. The speaker is influenced by his mispronunciation which leads him to frustration. Pourhosein (2012) assumes that: "limited pronunciation skills can affect learners' self-confidence by decreasing it, also restricting social interactions and thus negatively affecting estimations of a speaker's credibility and abilities". It is clear from the quotation that limited pronunciation creates a psychological nervousness that affects the speaker's self-confidence and ability to speak or seek for clarification in an interaction.

As a result, he/she won't feel comfortable and confident using the language, and will prefer to keep silent instead of feeling humiliated. This weakness will limit the speaker's opportunity to practise the language, thus impact their language development. In addition, inaccurate or unclear pronunciation does not only lead to frustration, but also to hinder the speaker's life in different ways. For instance, in building social interactions making friends, meeting needs, and job advancement.

Secondly, Morley (1991) argues that intelligible pronunciation is an essential component of communicative competence. Therefore, it is also reasonable to know that limited pronunciation affects the meaning of the message or the speaker's output in a communication. To put it in another way, it may completely alter or destroy the meaning of a message which leads to misunderstandings and confusion, or being prejudiced by the hearer concerning the level of proficiency of the target language. To be able to understand, here is an anecdote experienced by a friend of P. Szynalski: "After coming back from a vacation in the United States, a friend of mine said: Whenever I spoke to a person in America, they kept asking me *What? What?* I would repeat my sentence again and again. Finally, they would say *Ah-ha!* and then repeat my sentence, using exactly my words! It was very humiliating. I knew my words and grammar were good, but nobody would understand me, just because of my pronunciation. I am very motivated to learn English now".

Therefore, when people talk in real life, the first thing that their interlocutors notice is their pronunciation. The speaker may use good grammar and advanced vocabulary, but if the pronunciation is inaccurate, he/she will be considered as a bad speaker of English. It is all about the first impression. It is also important to note that some people succeed in achieving a good communication, yet it is not easy to understand them due to their excessive foreign accent. As a result, it takes efforts to listen to them



and understand them. Thus, learning English does not necessarily mean learning lists or words and grammar rules only, pronunciation rules are also important. For the aforementioned reasons, it would be quite logical to combine grammar, vocabulary and pronunciation to achieve intelligibility and clear communication. This summarizes the whole discussion and the goal of foreign language learning and teaching:

Vocabulary+ Grammar+ Pronunciation= Intelligible communication
--

**Figure3:** Components of language.

However, one should admit that learning pronunciation is not an easy task especially for adult learners, due to several factors. In the next section, we will discuss the different factors that influence second and foreign language learning, focusing on the English language.

### **2.3. Components of Pronunciation**

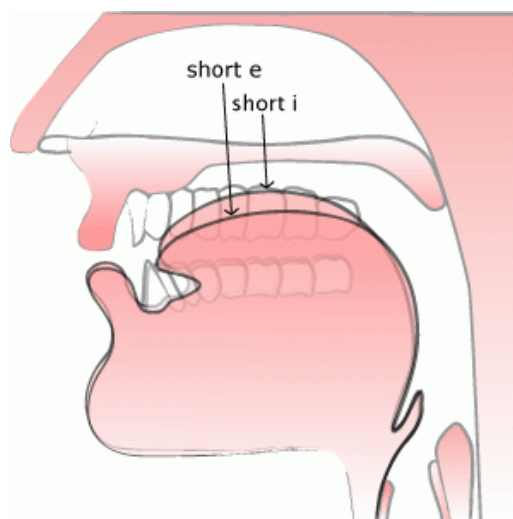
Obviously, pronunciation is an integral and an inseparable aspect of language which represents a golden key for the intelligibility of speech and language proficiency. Generally, it is defined as how language is produced by a speaker. This definition refers to pronunciation as the act of pronouncing sounds of a language (the segments), in addition to the aspects of speech that are used to produce/ pronounce elements that are beyond the segments such as, stress, sentence stress, intonation and rhythm. These elements are referred to as the supra segmental features of speech. It could also be said that pronunciation is the way we speak that includes a combination of both segmental and suprasegmental features. The segmental features refer to the segments of a language. What is meant by segments is sounds; vowels and consonants. On the other hand, the suprasegmental features which refer to elements that govern units that are beyond one sound (syllable, word or utterance), such as intonation.

It is also important to consider that pronunciation is transcribed and not written. In fact, it is represented graphically, or by using phonetic symbol. There are two kinds of transcriptions; phonemic or phonetic. The difference between them is that the phonemic transcription is used in phonology where every detail is functional. Segments are transcribed between slashes for example, /he'loo/. However, the phonetic transcription is used in phonetics and sounds are transcribed between brackets [ ]. This transcription represents the articulation of sounds. It adds details that are not functional for instance; aspiration [ 't<sup>h</sup> eɪbl ].

### **2.3.1. Segmental Features of Pronunciation**

The English sound system is made of individual meaningful sounds. These sounds are also called segments. A segment may be a vowel; single/diphthong/ triphthong, or a consonant voiced or unvoiced.

To start with, vowels are speech sounds produced with no obstruction to the air flow coming from the lungs. In other words, they are produced when the air passes over the vibrating vocal cords and then passes freely out of the mouth. For instance: pronouncing the sound /i:/.



**Figure 4:** The Positions of the vowel /e/ and /i/ .

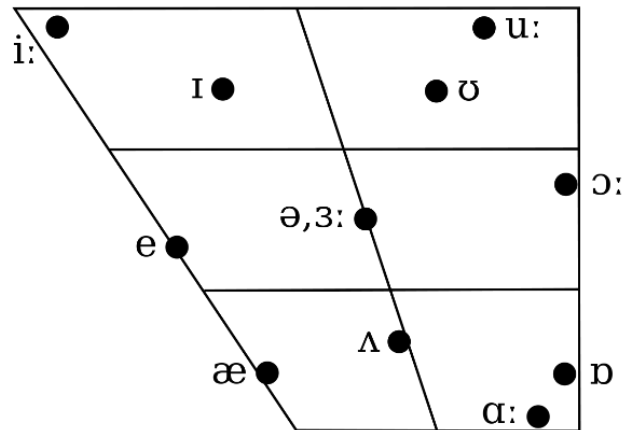
The positions of the tongue and lips alter the size and shape of the resonating cavity so that different vowel sounds are produced. For instance, as illustrated in the figure above, the realisation of two vowels /e/ and /i/.

English vowels are divided into seven short and five long vowels. These vowels are organized according to where (in the mouth, the oral cavity) they are produced. The most satisfactory scheme is the one proposed by Daniel Jones: The Cardinal Vowel System. It is an imaginary scale for measurement that allows us to describe any vowel in the oral cavity in terms of their articulatory properties:

1. The part of the tongue that is raised (front, centre, back position)
2. The height of the bulk of the tongue (High, mid-high, mid low and low) or (close, mid-close, mid-open and open)
3. The degree of the lip-rounding (The kind of opening made at the lips: various degree of lips rounding/ spreading).
4. The length of the sound (short/ long).

In addition to the properties mentioned above, four other features are taken into consideration to describe vowels:

5. The state of the velum (Oran/ Nasal)
6. The state of the vocal cords( vibrating)
7. The position of the tongue ( are the rims of the tongue in contact with the upper molars)
8. The vocal muscles can be relaxed or stretched tight (lax/ tense).



**Figure 5:** RP English Vowel Diagram

On the other hand, consonants are made by causing a blockage or partial blockage in the mouth, and these are usually described in terms of:

- Where the sound is made in the mouth, or *place of articulation*.
- How the sound is made, or the *manner of articulation*.
- Whether or not the vocal cords vibrate, or *voicing*.

Consonants, therefore, all differ from each other in at least one of these ways.

Abbas (2012) conducted a study where he investigated on the various errors made by learners that humper their communication. He based his study on the segmental aspect of language, where he analysed in isolation their segmental production of words. He found that when errors are made at this level, speech production is sometime unintelligible. He gave the example of a student who pronounced the word soap /soup/ instead of /sup/ when addressing to a waiter. This situation created a confusion between them, and especially frustration by the student.

Traditional approaches of teaching pronunciation based their curriculums on the segmental side of pronunciation, yet it was not of a great success, especially when teaching foreign students. The reason is because of their mother tongue interference. In fact, English language may have sounds that do not exist in the students' native language

which may cause several difficulties. However, recent approaches find that the suprasegmental features affect largely the intelligibility of speech rather than the segmental ones.

### ***2.3.2. Suprasegmental Features of Pronunciation***

The suprasegmental feature or the prosodic features relate represent the macro level of pronunciation. D. Crystal defines these features as "vocal effects constituted by variations along the parameters of pitch, loudness, duration and silence". It means that the prosodic features are phonetic properties of an utterance that apply to a string of several sounds rather than single segment, such as a syllable, a whole word or an utterance. Said differently, they are superimposed on the segmental features. These features are mainly, stress, rhythm, tone, pause and intonation.

The use of the supra-segmental features in speech by foreign speakers helps them achieve a good pronunciation, intelligibility and comprehensibility by the listener. Anderson-Hsieh et al says that "prosodic variable" had the strongest effect on global pronunciation ratings (1992: 530).

The quotation embodies the fact that the Supra-segmental are often used in the context of speech to make it more meaningful and effective. If these features are absent in a word, an utterance or a continuous speech, for instance, the message being conveyed may lose its effectiveness. Take this example: present (v.) /pre'znt/ (n.) /'preznt/. The position of stress changes completely the grammatical function of the word, as well as its meaning.

It is therefore essential to consider stress in learning intonation, which is an inseparable aspect of language learning, especially in progressing and acquiring a good pronunciation, and even a native-like performance. The next section describes and relate

the role of this prosodic feature to the understanding to speech, being produced or perceived.

#### **2.4. The Role of Stress a Prosodic Element in Language Learning**

In real life, stress generally refers to the worried or anxious situations that people suffer from 24hours a day; however, stress in linguistics has different function, among them, a distinctive feature, participating in the intonation of utterance and therefore forming the meaning of speech. Thus, it leads to reach a good pronunciation and comprehensibility.

This significant feature of the English language pronunciation refers to the emphasis that we put on certain syllables in a word and even sentence during the process of speaking. Therefore, the achievement of powerful communication requires appropriate use of stress patterns.

Stress phenomenon has always been the source of interest to several scholars and linguists and the area of difficulty of foreign learner users. First of all, Stetson (1915) presents a concert and physical definition of stress. He believes that: “When producing a syllable stress, a contraction of the muscles of the chest wall happens”. It means that the stress occurs in the syllable when the air stream is expelled from the lungs more aggressively with an increase in laryngeal activity and a release in the unstressed one.

Hayes (1995), another figure in the field claims that each syllable has got a degree of force that is named rhythmic structure which is the result of the stress occurrence or work. In other words, a higher respiratory energy happens in the chest when a stressed syllable is produced.

Finally, Roach (1991) argues that: “stressed syllables are recognized as stressed because they are more prominent than unstressed syllables”. Previously, we noticed when dealing with syllables, that there are words that have more than one syllable and one of them is going to be more prominent than the others, like in the word /'ti:ʃə/. In this word the first syllable /ti:/ is more stressed or more prominent than the second syllable /ʃə/. Now, we may actually wonder what can make a syllable prominent.

In addition to word stress, sentence stress is another golden key to English pronunciation and intelligibility. The slight difference is that in sentences stress the words in an utterance are going to be stressed rather than a syllable in a word. Thus, this implies that there are words that are stronger and others weaker. This process signals to the hearer the most important word that should be understood in a conversation.

In fact, stressing different words in an utterance creates different meanings depending on the message wanted to be transmitted. It depends on the context of the message and on the particular meaning the speaker wants to convey. Plavka argues that “The position of the stress is determined largely by the meaning which the utterance is intended to convey.” (2003: 38). Here is an example that illustrates this fact; John bought a red car. This sentence can be uttered in three ways

1. JOHN bought a red car.
2. John bought a RED car.
3. John bought a red CAR.

The words that are written in capital letters are more prominent than the rest of the elements. The first utterance may be said in a situation where it is known that John himself has bought a car and not another person. The second one will possibly try to

convey that John bought a car which is red coloured. Here the stress is on the colour to show that the car is not blue or pink but red. The last one emphasizes on the word 'car' to convey that John has bought a car and not a bicycle or something else. So, the choice of stressing words in a sentence depends on the attitude of the speaker towards some aspect of the message.

There are also rules that govern the choice of stressing some words in an utterance or not. Stress is carried in words like nouns; demonstrative, emphatic, interrogative and possessive pronouns; adjectives proper; active and passive participles; lexical verbs; adverbs; numerals; longer prepositions; two-word conjunctions. However, in all rules there are exceptions. For instance, we don't stress comparative and superlatives. It depends on the message we want to convey. The library needs 'more interesting books. It means that the number of books in the library is not sufficient and they need more books. But if we don't stress the word 'more' the meaning changes and it becomes, the library needs more 'interesting books, which mean that the actual books are not interesting.

## **2.5. The Function of Stress in speaking: Oranee English learners: A case Study**

This section highlights the function of stress in learning a foreign language, giving the example of the Oranee learners of English as a case study. As mentioned before, stress is very crucial in English pronunciation because the meaning of words depends on it. First of all, stress is used as a grammatical device that helps distinguish and give the function of each word when they are spelled in the same way but have different meanings when used in an utterance or a context. For instance, the word "Present" has two functions. It can be a verb, a noun or an adjective depending on the context.



I present to you this present.

/ aɪ **prɛ**'znt ju: ðɪs 'prɛznt/

The same case with compounds that are written in the same way but have different meanings like a "hot dog" (a form of food) and a "hot dog" (an overheated animal). The use of stress is obligatory in a sentence because it has an important role to communicate and to understand people even in difficult situations. For instance, if you do not hear a sentence clearly, you can still understand it because of the position of stress. Especially for foreign learners, sometimes when listening to a speaker, they have some difficulties in understanding everything; however, they can pick up the words that are stressed to guess the meaning of the sentence; they are not obliged to understand the whole sentence.

Belhoum & Benhattab (2016) conducted a study which deals with the acquisition of Received Pronunciation (RP) English prosodic features namely word- sentence stress and intonation by Algerian learners of English as a foreign language. It aimed at identifying ways of helping learners achieve a good pronunciation through the mastery of these features. The results show that: "by placing stress and intonation patterns in the right place in words and utterances, 20% of students achieved nearly a perfect pronunciation, 46% clear and 33% understandable, suggesting that the aforementioned features play an important role in pronunciation accuracy and speech intelligibility" (p.1). It comes clear that stress and intonation play an important role in acquiring and producing an intelligible speech. Chapter four of the thesis describes in details the role of intonation in this domain.

## **2.6. Conclusion**

To sum up what have been said previously, the role, the status and importance of pronunciation faced an inconstant change during time within the different methods of teaching English. Yet, what is important to note is that pronunciation with all its aspects, segmental and suprasegmental should be taken into consideration and included in teachers' syllabus in order to enhance students' production and perception of the English language.

This chapter is an introduction which highlights the position of pronunciation in the domain of teaching English as a foreign language. It explains in details its role and its fluctuating status throughout history. In addition, the effects of the lack of pronunciation on foreign English learners' intelligibility and comprehensibility are considered. The final point discussed in this section explains what is meant by pronunciation and what are its fundamental components; segmental and suprasegmental

## **Chapter III**

### **Imitation versus Phonetic Awareness via Audio-Visual**

#### **Input**

Technology is part of the human life. It was created to facilitate living and improve humans' living quality. It is found in every detail of life, whether in medicine, nutrition and learning. In fact, people use modern and computerized methods to improve and achieve the best aspect of things. In the domain of learning and teaching, universities and schools try to digitalise their functioning, since it is considered to improve students' management and help them increase their L2 or L3 level of proficiency. Consequently, the shift in focus towards teaching pronunciation and the suprasegment features encouraged the application of instructional tools as computer programs in teaching those aspects of language.

In fact, teaching must be guided and well-structured according to the brain system processing to achieve intelligibility and comprehensibility. Exposing learners to a huge amount of information will not be beneficial for them. Therefore, quality and organized input should be considered. The actual chapter provides different technics that should be implemented in order to develop learners' language fluency and overcome learning blockage. It first describes the nature of the human brain and memories which are part of the learning process. As a result, the chapter proposes the various theories of literature which followed this functioning in order to propose learning theories such as the audio-visual explanations, phonetic awareness and also the dual coding theory and cognitive theory of multimedia.

### **3.1. The Role of Imitation in Learning an Additional Language**

In the field of phonetics, imitation is referred to as phonetic convergence or phonetic accommodation, where a learner imitates by taking on the phonetic characteristics of their target language missing in their mother tongue. In other words, it is a process where the learner perceives and reproduces the phonetic elements. They are

generally imitations of specific aspects of language such as intonation, rhythm, accent variation of frequency movements and so on.

Imitation in language learning; whether it is a first, a second or a foreign language has always been a key element in achieving a good pronunciation. Andrew N. Meltzoff; an American Psychologist, says that: “Imitation accelerates learning and multiplies learning opportunities”, he noted. “It is faster than individual discovery and safer than learning by trial and error.”

In fact, imitation is a natural process which is used by children in order to learn the language they are exposed to. Capliez argues: « Through an imitation process, language perception is bound to have an influence on children’ early speech production. » (2016: 12). The segmental and suprasegmental characteristics of the perceived language influence and encourage logically children to use the present sounds of his direct environment. This process may be used by adults aiming at learning a target language.

In the world of teaching second and foreign languages, imitation has always played a major role and considered as an undisputed factor to achieve a native like pronunciation. In fact, researchers in the field conducted experiment studies where they used the imitation approach in their teaching process. The results showed a significant improvement in acquiring phonetic structures. Šimáčková & Podlipský (2015) conducted a study amongst Czech learner of English and discovered that distracted imitation approach helps his informants improve their pronunciation. Another interesting study was conducted by A. Rojczyk and A Porzuczek (2013).

Samifanni (2020) considers it as a skill in language learning and a fundamental element in achieving fluency of a target language. He tried to describe how imitation can help learners improving their fluency using a deductive axiomatic research design. The

results show that imitation is beneficial on condition that it is correctly and properly used in an enjoyable environment like in role-playing. In fact, imitation is not as simple, nor a primitive behaviour. Its neuronal process that implies a high level of cognitive involvements and many complex transformations. Actually, when imitating for example a series of sounds, they are first transformed into wave sounds which travel through the air until reaching the ears of the hearer. Next, those sound waves are transformed into neural signals in the brain, which are then changed several times into electric messages that are received by the auditory projection areas of the cortex. The latter aims at translating those signals into representational and meaningful elements which form comprehension. Shortly afterwards, the reproduction phase takes place by the activation of specific neural networks used to produce the complex gestures of the speech muscles, respecting the correct sequences to duplicate the input sound model. (p.4). Therefore, the environment where the imitation process takes place, should be considered by teachers and learners, in addition to the time interval between the model and the imitation. In fact, the process of imitation is completely different according to the length of time which occurs between the moment the speech input is heard and its reproduction. In this case we talk about the immediate imitation and the distracted one that are discussed in the next section.

### ***3.1.1. Immediate versus Distracted Imitation Methods***

As mentioned in the above section, imitation can differ according to time dimension. In fact, the interval of time between “the input” and the reproduction of it by the learner gives the nature of the imitation. Speidel (2008) attests that: “If the imitation is preceded within a short period of time by its model, it is called an immediate imitation: if there is a longer time interval (typically a day or more). it is a deferred imitation” (p.5).

Another type of imitation is the distracted imitation where there is the interference of use of another language which creates a cut between the imitation and the reproduction.

For the research's sake the immediate and distracted imitation techniques will be discussed. The first one represents a direct perception and production of a peculiar language structure. In fact, there is no gap or action which occurs between the moment of hearing the target language and reproducing it. For Bandura (1969) ( cited in R. Zentall & Baer, 2015):

“immediate imitation was viewed as a reflexive response akin to contagious behavior, whereas deferred imitation indicated a more cognitive process in which an observer had to *represent* the response at the time of observation for later retrieval when performance was assessed.” (p. 335-374)

On the other hand, deferred imitation occurs when some time passes between the moment the input was heard and its reproduction. R. Zentall & Baer (2015) defines it as: deferred imitation (that he called observational learning) in which some time passes between the time of observation and performance by the observer”. On the basis of this quotation, it can be said that distracted imitation is a type of deferred imitation. In fact, distracted imitation requires first a native language use before reproducing what was heard, creating a distraction and a longer time between what was heard and the performance. To be able to understand, take the example of Rojczyk (2013) who investigated the production of voice onset time (VOT) plosives produced by Polish English speakers. He specified that English /p,t,k/ are produced with a long lag VOT; whereas, Polish is characterized by a short- lag VOT value. He there for conducted an

imitation approach to teach his learners the English aspects comparing three tasks: reading, the immediate imitation, the distracted imitation. The results show:

The results revealed significant increase in VOTs in immediate imitation and intermediate values for distracted imitation. These results were interpreted to indicate that immediate imitation may bypass the influence of native articulatory habits and that distraction in imitation results in incomplete recovery of native phonetic patterns.

Another significant and efficient method is the gesture learning approach for foreigners. This method consists on using gestures or movements of the body, generally the hands and the face, that explain the realization of a peculiar phonetic structure. In fact, studies revealed that two-thirds of our communication is nonverbal. Learners and even teachers use hand movements and facial expressions to explain and clarify the meaning of what is being said. In fact, they can contribute to the study of some key issues in language learning. Gulleberg (2010) defines it as: “Gestures are spatio-visual phenomena influenced by contextual and sociopsychological factors, and also closely tied to sophisticated speaker-internal, linguistic processes. (p. 4)

In this research paper our study will follow Wrembel’s framework dedicated to teaching pronunciation. It consists on regrouping various techniques which lead to the phonetic awareness of learners. For example, she used physical awareness to develop her students’ stress performance. These methods of awareness by using explicit knowledge highly contribute to language acquisition and learning of pronunciation.

### ***3.1.2. Mirror Neurons and Motor Responses in Learning***

In social cognition and psycholinguistics fields, neurons are the centre of interest for researchers for various reasons. To start with, those elements constitute the nature and mechanism of learning. They are essential in the transmission of information from one



place to another. Said, differently, they are the body information holders that receive and transmit neuronal data from one point (external information receivers) to the central system, which is the brain and spine. They function by sending electrical impulses through their cell bodies towards their endings, called axon. (Campbell et al., 2008). Having considered the human basic function of neurons, it is now reasonable to explain the process of learning based on human neurons.

Learning is represented by a repetitive neuronal activity which stimulates central nervous system, consequently neurons. In other words, those neurons which hold information create a pathway across the system, which results in a network. The repetition of the same information will use or fire the same neurons, strengthening the pathway, conducting this knowledge from the short-term memory to the long-term memory. Therefore, in order to learn an additional language practice is essential in learning. (Rizzolatti & Fadiga, 2009). Thus, a language must be maintained to strengthen the acquisition pathway of learning.

Yet, mirror neurons are specific neurons which help humans learn by imitation. They are activated when someone performs an action or sees it being performed by another one. For example, when a monkey watches his mother open a nut, he will imitate her, as a result his mirror neurons will be fired. Those type of neurons are closely related to learning and considered as a fundamental tool. In fact, they are activated in situations where social, empathic, and imitation behaviour are needed. For instance, they are responsible for contagious laughter and yawning. Sabitzer (2013) argues:

“Mirror neurons thus contribute to learning what is appropriate in social interactions and to the transfer of

mannerisms and allow children to follow behavioral rules which were never explicitly explained to them.”(p.46)

Actually, in the process of learning, those neuros represent a fundamental instrument which permits for example learning how to eat, dress and especially speak. In fact, they allow us to learn through.

imitation. As cited in Sabitzer (2013): “ Rizzolatti and his colleagues suggested that mirror neurons constitute the basis for speech development in humans”. In fact, the process of mirror neuros is also applicable for language perception and the re-production of articulatory gestures. The functioning implies the understanding of language production, then being able to reproduce and simulate the exact process thanks to the mirror neurons. Therefore, learners and teachers may profit from the existence of this system as far as pronunciation is concerned. This reproduction consists of articulatory gestures as well. Teachers may use audio visual instruments to provoke the use of this innate adaptation of action understanding and create or establish a new pathway in their central nervous system which leads to language learning. Thus, imitation and visual input is essential to fire this innate learning process. Consequently, the motor theory in speech, which is basically based on visual learning, became the centre of interest for several researchers in various domains. In fact, it is an ideal method of ensuring mirror neurons’ activation while learning or teaching a language.

This theory was first elaborated by Liberman (see Liberman et al., 1967; Liberman & Mattingly, 1985). It postulates that learners perceive spoken input by reference to how it is physically realised, that is, by identifying the vocal tract gestures. Originally, speech is produced by a series of muscular movements implicating the respiratory movements which solicit different organs of the articulatory tract like the larynx, glottis, lips tongue

etc. Each of these gestures of movements imply neural representation with their corresponding sound providing phonetic information. Rekowski (2020):

“The perceived acoustic signals are decoded by articulatory representations that synthesize the vocal tract shapes needed to produce a given speech pattern (Eckman, 2012; Pickering, 2012; cf. Selinker, 1972) instead of identifying the sound patterns of speech.” (p.47)

This quotation embodies the fact that this process is activated by a motor system in the central nervous system which permits to L2 and foreign learners perceive the articulatory gestures assign to a peculiar sound (articulatory gestures such as rounding the lips) and reproduce it by learning to use the appropriate musculature of his mouth and his articulatory system.

Fadiga’s (2002) results show that when an individual listen to a language stimuli, the central motor system of speaking is activated in a peculiar manner. In addition, not only oral and facial mirror neuros are activated when listening to an interlocuter, but also the those related to the mouth movements. It therefore sustains that the mirror neurons system implies the hypothesis of a motor perception of language “*perception mortice de la parole*”.

In the present research thesis, we will base our work on the effect of the distracted imitation method on Algerian learners’ English improvement. In order to apply this learning method, audio visual explanations are necessary to be used to activate their phonetic awareness by exposing then to quality input. The next section will develop those points in regard to Oranee EFL learners.

### **3.2. Audio Visual Explanations: Toward Phonological Awareness**

Nowadays, in the field of applied linguistics, the shift of focus towards teaching pronunciation and the suprasegment features encouraged the application of instructional tools as computer programs in teaching those aspects of language. In fact, methods regarding second and foreign language acquisition are flourishing in an environment which is becoming dominantly online for the sake of facilitating learning. Yet, the fundamental objective of “instruction” is to transmit information in a arranged environment (Heinich,R.et al 1996). The concept of environment in this case does not only refer to the place where the class is done, but also the different tools used to convey that information. They can media, technology, instruments and also audio-visual aids. In fact, verbal and visual communication help attract learners’ attention as well as their motivation. “Sunder (2010) stated that leaning is more effective when sensory experiences are stimulated” (As cited in Prem Sunder, 2018). As a result, those methods have gained attraction in the field of second and foreign language learning.

As mentioned in the previous section, imitation require a quality stimulus or a model to be imitated by learners. In order to expose learners to those native information, audio visual instruments are needed. Before considering this point, it is first important to considerate what is meant by audio visual explanations and phonological awareness.

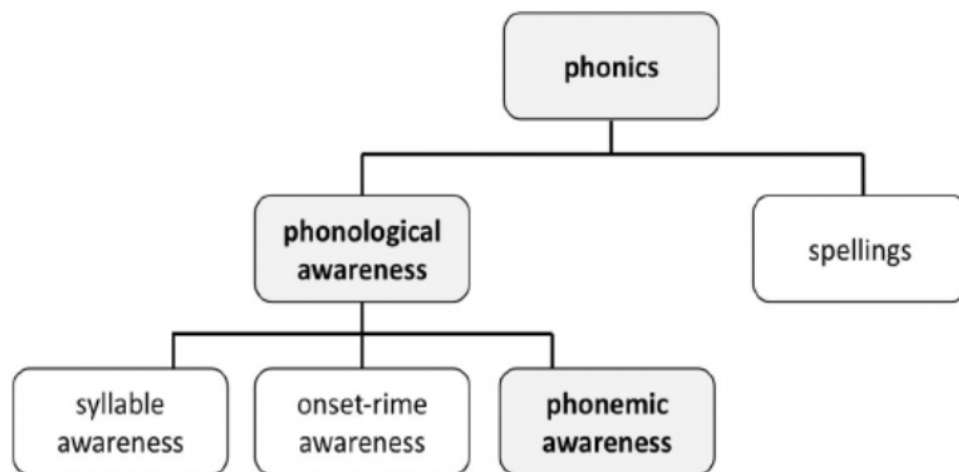
To start with, audio visual aids are instruments of education used as a tool to teach and learn. Audio refers to the sound waves heard by leaners and visual means what is seen by the eyes. Wei & Fan (2022) argues that: “Audiovisual input contains several key elements, including audio, video, and on-screen text.” (p.1) This combination of the sound and the visual image is the key characteristic which distinguishes the efficiency of language learning. In fact, learners will access to both visual and oral information, making

a connection between both inputs. Mayer (2014) argues: “people learn more deeply from words and pictures than from words alone” (p.1). Consequently, several researchers have based their scientific investigation in second and foreign language learning on this instrument as a tool of explanation for knowledge awareness. (Meyer,2014; Peters & Webb, 2018; Rodgers & Webb, 2019). Sydorenko (2010) conducted a study where he compared three input model, among them audio visual information. The study reveals that visual images highly contributed in the correct realization of word translation by the informants 36 %, compared to only 6% of correctness when images where not used.

Coming back to the mirror neurons theory, it can be assumed that audio visual explanation of a genuine pronunciation realization will lead learners create a new pathway in their neuronal system. In addition, it will activate their motor system (see section 3.1.2.). In addition, the association of the image, concept and the audio will allow learners create initial form-meaning links in their mental lexicon (Peters et al., 2016). In other words, they are a perfect means to see language in use, especially it helps learners develop their phonetic and phonological awareness in order to improve their listening skills as well as their production.

Studies showed that our speech perception and abilities are constructed by the linguistic input we are exposed to. The quality of this input and explanations create a phonetic awareness. The latter is defined as the ability to notice, think about and work with individual sounds or steams of sounds when speaking. One should make note a difference between phonemic, phonological and phonetic awareness. They are generally used in literature to refer to the same phenomenon, yet they refer to distinct processes according to some authors. In fact, phonetic awareness is defined as: “Meta-phonetic awareness can be described as the ability to reflect on and manipulate the sounds and sound system of a language independently of function and meaning.” García Lecumberri

(2001, p. 238), Said differently, it is the conscious ability to notice and manipulate sounds at the segmental level (more specific properties of sounds including, vowels and consonants), in addition to their articulatory, perceptual and acoustic characteristics. Whereas, a phonological awareness implies the ability to notice both segmental and suprasegmental units of speech. In other words, it also includes the recognition of the contrastive units of the syllables, stress and intonation features. The phonemic awareness, on the other hand, regarded as a third concept used in literature, is defined as the concentration of individual phonemes. (Nicholson, 1997). See the above graph.



**Figure 6:** The different types of awareness.

Yet, opponents and most authors in literature don't make such a distinction. And use phonetic awareness to as a broader sense to refer to both phonetic and phonological characteristics of sounds systems. The actual study concentrates on the learning of the intonational characteristics of declarative questions; it therefore concentrates on developing the phonological awareness of the Oranee informants.

It is important to point out that several studies have shown that learners' who acquired and trained their phonetic awareness of certain linguistic realizations such as

phonemes or words, succeed in improving their language performance. Armand & Touhami (2016) conducted a study where they aimed to test the efficiency of audio-visual explanations in investigating the degree of stop unrelease in pre-stop word final stops and sentence final stops by French learners. Results revealed that this method has an important impact on learners' stop unrelease strategy.

Now, it is reasonable to understand how our brain deals with these inputs in order to use it later. As a result, the dual coding theory gained a lot of attention since it deals with the visual and auditory memories and their relationship in learning an additional language. The next section will describe the function of this theory, relating it to the process of learning. In fact, it is considered as the most efficient method of understanding the process and the mechanism that happens in our brain as we attempt to understand and make sense of the incoming information in our environment.

### ***3.2.1. The Dual Coding Theory in Learning a Foreign Language***

The dual coding theory (DCT) was originally discovered by Paivio (1969) on his review on the studies of imagery. The aim of it is the use of different type of stimuli (visual and audio) to help learners encode and store information in their brain efficiently and making it easily retrieved on real speaking situations.

To start with, it is important to know that information and knowledge(input) are stored and kept in our working memory located in our short-term memory responsible of storing temporarily those information.

Paivio (1969) discovered that our brain memory is disposed with two systems, that is to say, two different and independent codes or channels that are responsible of receiving and dealing with visual and verbal input. Despite the fact they are separated, yet they function interconnectedly. In other words, they can be activated separately of

simultaneously, depending on the task that an individual would perform. Paivio (1969) refers to it as the “associative connections” which permit to link words and images to create a concept and associate meaning. Separating the stimuli would not be as efficient. As a matter of fact, it is known that verbal stimuli are less efficient than the visual ones, since they are considered as sequential and we cannot integrate a large amount of information as we do with images.

DCT; hence, counsel to use both audio and visual stimuli in absorbing information. According to Paivio (1969) the human cognition has those innate systems and functions in two channel memories; therefore, the combination of visual and auditory stimuli forms a robust approach in language learning, compared to only a single stimulus. Take the example of the below picture where a teacher tries to explain the production of the diphthong /oʊ/ using audio visual explanations.



**Figure 7:** Audio visual explanation to realise the diphthong /oʊ/.

It is clear from the above figure that the teacher used gestures in addition to audio and visual elements to explain the phonetic realisation of the English diphthong /oʊ/. This

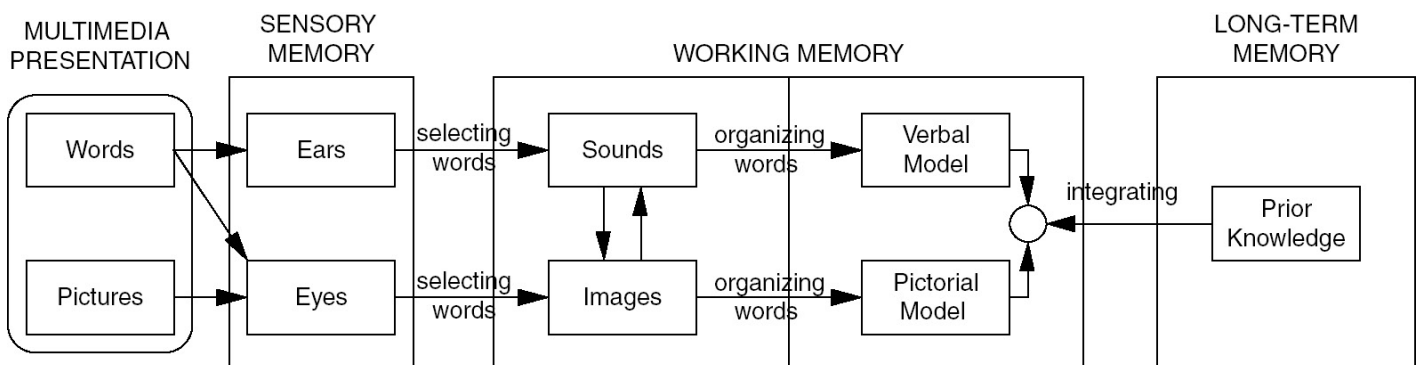


method of learning as stated above is more efficient than having only the written form of the sound “the phonetic transcription” which can be misleading in some case. In fact, one transcribed sound can have different realization depending on the language.

Mayer (1997) suggest a similar theory yet, based on three main assumptions: three separate channels: audio, visual and the capacity channel. The next section will explore this learning approach called the Cognitive theory of multimedia.

### 3.2.2. *The Cognitive theory of multimedia. Using Technology in Pedagogy.*

Mayer (1997) shares the point with the above authors assuming that audio and visual mediums of learning are inseparably important for processing information. He argues that: “multimedia principle” states that “people learn more deeply from words and pictures than from words alone” (p. 47). He therefore suggests a theory or a learning program where he detailed the way a teacher has to structure multimedia materials efficiently to maximize learning. He tried to propose a teaching model on how to use those multimedia aids and make their presentation effective and fruitful. Before considering this point, it is important to know how Mayer (2014) visualizes learning in our cognitive system.



**Figure 8:** The cognitive Theory of Multimedia Learning. (Mayer, 2014)

The above figure synthesises clearly and simply Mayer's theory. To begin with, the first step is to expose learners with multimedia presentation; it might be videos, pictures, charts, printed words etc.). In fact, the input might be auditory or visual. They are perceived with the eyes and ears and stocked in the sensory memory for a brief moment, but processed separately in their respective entities. Shortly afterwards, the learner will process information and learn it. This process occurs in the working memory where the learner is able to select and organize the relevant information to keep, remember and use later. The stored information remains separated in two models; verbal and pictorial models which are then integrated in the long-term memory as prior knowledge. McGraw (2019) states: "Multimedia instruction helps students learn more deeply because it takes advantage of these two separate channels and allows the student to go through the process of making multiple models to really understand the material that is presented to them." (p.1).

Having considered and understand the functioning of processing information in the human brain, it is reasonable to look at the methods to incorporate those multimedia elements in an effective instruction. The first fundamental point that Mayer sustain in this theory is the third assumption which is "limited capacity assumption.". In other words, it suggests that learners have limits on the amount of information they can process at any given moment. For example, it is complicated to write a text, listen to the radio and having a conversation. Yet, Mayer (2009) argues that: "most people can maintain maybe five to seven "chunks" of information in working memory at a given time" (p. 67). Therefore, an active processing assumption should be involved, where learners identify and select their relevant information and store them in models in their long-term memory (see the above section). Consequently, the multimedia presentation should be well structured and organized and not overwhelmed with various information. One way to apply this for

example is to limit the amount of text a PowerPoint and create a balance between text and images.

Second, to make learning effective, teachers should encourage learners to activate their active processing. In other words, the multimedia aid should be well organized to permit the learners create a mental model. Meyer argues that there are five model structures and each one contains specific types of information associated with a visual representation. First, the Process Structure, where the issue should be explained and presented as a cause-and-effect- chain. Second, the comparison structure representing a matrix where the structure compares several points between two or more items. Next, the generalization structure, representing a branching tree. The tree represents the main idea and the subordinate supporting details. The fourth structure is referred to as enumeration structure which represents a collection of items, also represented in a form of lists. Finally, the classification structure which is represented as hierarchies or classification of sets and subsets. These structures constitute different models to make visual representation effective during meaningful learning from multimedia instruction.

### ***3.2.3. Effects of Phonetic Awareness instructions in foreign language Learning***

As stated above, this research will use the term phonetic awareness to refer to the understanding that words are composed of units such as syllables, segments, onsets, rhythm and also, intonation and stress. Several researchers have dealt with the segmental aspect of phonetic awareness, yet it is also fundamental to tackle to other aspect of language which is inseparable to achieve comprehensibility (listening) and intelligibility (speaking).

Before considering the suprasegmental level, it is important first to understand how phonetic awareness function at the segmental level. There are various tasks that teacher

might use to tackle this aspect of learners' awareness. Venkatagiri & Levis (2007) referred to them as specific task to measure learners' phonetic awareness. For example, the phoneme deletion (Bruce, 1964), where a learner is given a word like <fat> and asked to delete one sound and keep the rest (/t/) and keeping (fa). This will permit to make aware the learner of the sound combination of the word. The other task is the phonemic blending, for example asking a learn to guess what does /f/, /a/ and /t/ say. Next, phoneme counting for example tape out each sound in fat. Lastly, phoneme reversal for instance, asking the learner to say the sounds of cat backward. Piasta and Wagner (2010) state that: "the explicit instruction of phonological awareness, combined with grapheme-phoneme instruction, facilitates the acquisition of alphabetic principle and the correct development of phonological abilities." (As cited in Kochaksarai & Makiabadi, 2017, p.107),

It is known that the difficulty in learning a foreign language is higher when it comes to adults. Therefore, they need more explanation to explain the process of how the target language functions. Bae et al (2012) conducted a study where he tested the effects of phonological awareness instruction with phonetics on the oral and aural English proficiency. In other words, the aim of it was to find whether phonological awareness which implies onset, syllable, rhythm and phoneme awareness help learners achieve an effective speaking. The results show:

"The group with phonological awareness class with phonetics received higher scores in listening and speaking test than the group without phonological awareness class with phonetics in the post-test. This study implies that phonological awareness class with phonetics is helpful for the improvement of listening and speaking ability. With this research, we can also say that students' communicative competence increased" (Bae et al, 2012, p.1).

Yet, it is clear from literature that research investigating the influence of phonemic instruction is more developed compared to researchers' interest toward the effect of phonetic (phonemic, listening and speaking awareness) instruction on both L2a and L3 learning. (Ehri, 1979; Perfetti; Yopp, 1992). The present study aims at developing this domain and investigates on the importance of phonetic awareness in L3 instructions.

### **3.3. Conclusion**

It can be concluded the phonetic and phonological awareness play an important role in learning a foreign language. pedagogical strategies in instruction must concentrate their work on methods and material that are in adequation with the functioning of the human brain. Teaching must be guided and well-structured according the brain system processing to achieve intelligibility and comprehensibility. In fact, exposing learners to a huge amount of information will not be beneficial for them. Therefore, quality and organized input should be considered. The actual chapter provides different technics that should be implemented in order to develop learners' language fluency and overcome learning blockage. It first describes the nature of the human brain and memories which are part of the learning process. As a result, the chapter proposes the various theories of literature which followed this functioning in order to propose learning theories such as the audio-visual explanations, phonetic awareness and also the dual coding theory and cognitive theory of multimedia.

The next chapter is a theoretical consideration of the British English and the Arabic intonation. It provides a difference between their phonetic inventory, explaining learners' language interference in their English production.

## **Chapter IV**

### **British English Intonation in Negotiating Meaning**

## **Introduction**

“Intonation the backbone of English pronunciation” (Bailey, 2005; McDonough& Shaw 2003; Cook 2001), is an essential prosodic feature that plays an important role in all aspects of speech. Recently, this feature has been the interest of several linguists due to its high importance to achieve intelligibility and comprehensibility in communication especially for foreign learners. Therefore, teaching this aspect of pronunciation is compulsory because the lack of intonation patterns in an interaction may lead to misunderstanding and frustration in all situations.

In addition, it is a key element which enlightens the meaning of a conversation and gives it a flavor. It gives the hearer insights about the feelings of the speaker towards him and the topic being discussed. In addition, it provides linguistic information that speakers use to highlight topics, hold the floor and express contrastively. Furthermore, it can be used to determine sentence types, since it gives signals that help distinguish between a statement and a question, an order and a request etc.

This chapter provides first a brief description of intonation, where the relevant theoretical background will be viewed. It starts with a definition of intonation. Then, it discusses the functions it can fulfill in interactions in order to achieve meaning and intelligible conversations. It also describes standard Arabic intonation and gives insights on the Oranee dialect phonetic inventory. The purpose of this chapter is to compare those two languages to explain language interference and influence of the Oranee learners of English.

Also, this section highlights the different melodic contours based on Philippe Martin's theory (2016) that will be used for this work prosodic analysis. It is also important to provide a definition of declarative questions, since they represent the form of statements that the research is based on.

#### **4.1. Understanding English Intonation: A Historical Review**

##### ***4.1.1. What is RP English Intonation according to Literature***

Intonation is a supra-segmental feature and an important characteristic of language that plays an important role in conveying meaning. In fact, it can modify the function of an utterance by altering a simple statement to a question, request or an order. In addition, the speaker uses this feature to convey various connotations and feelings to the interlocutor. The actual research will attempt to prove the use or importance of intonation in altering a simple sentence to a question (declarative questions) uttered by EFL Oranee speakers both in ORD and English. Yet, before considering this research problem, it is reasonable to look at the definition of intonation.

This phenomenon has been defined and developed by several linguists through time and each of these theoretical positions make an important contribution to our understanding of intonation. The first physical definition of intonation was introduced by the Russian scientist M.V Lomonosov (1765). He describes it as a complex unity characterized by different acoustic components; tone, intensity, length and timbre. However, in the 20<sup>th</sup> century, linguists criticized this definition saying that intonation is not produced with various acoustic components, but is the variations that occur in the pitch of the voice. It means that this new definition restricted intonation to one characteristic only which is tone. This contrary argument was supported by D. Jones (1960). He argues that this feature refers to "the variations which take place in the pitch



of the voice in connected speech”. This definition is considered as narrow since it does not explore the core of intonation.

A more detailed definition of intonation that opened a large terrain for the supra segmental analysis was given by H. Palmer (1922). He described the structure of intonation units, also called tone units. He found that utterances can be divided into different structural units; head, pre-head and tail. The present work adopts Palmer’s (1922) definition of intonation.

In 1922-1940 different linguists came back to M.V Lomonosov’s and started to agree with his definition which regarded intonation as a complex unity which is made of several acoustic characteristic. G. P. Torsuyev defines the phenomenon as: “a complex unity of pitch, intensity, timbre and tempo of speech, which is one of the principle means of expressing the sense of the utterance.”(1950:79). we should also consider Levis’ view. He says that intonation “the quality of language that includes both rhythm and melody, and is produced by tonal height and depth along with stress, volume and varying length of pause.” (1999:37). Correspondingly, we understand from this quotation that pitch cannot be studied or analyzed in isolation in an utterance; however, it is closely bind to the other prosodic features of speech previously seen, such as stress, loudness, duration and even the quality of the voice.

#### ***4.1.2. A Historical Review of Intonation***

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## 4.2. English as an Intonational Language

### 4.2.1. Tone Units to Negotiate Meaning

Before considering Intonation in English, it is important to note that the use of pitch to negotiate meaning differs from one language to another. In fact, in the world, we find Lexical Accent Languages and tone languages. The former have a limited use of pitch to distinguish the meaning of words in an utterance, like Swedish and Japanese, while the latter uses both pitch and heights on every single syllable to achieve meaning, for instance Thai and Mixtec languages (Nolan, 2001: 343). English is neither a lexical accent language nor a tone language but is considered as an intonation language. Why? Because, if we analyze a speech in English, we find that tone occurs on a limited number of syllables. It means that English needs only one unit which is greater in size and prominence than a syllable in order to achieve meaning. This unit is called tone unit Crystal (1969), tone group Halliday (1967) or 'tone phrase'. It has only one peak of prominence in the form of nuclear pitch movement. Tone units can be realized in phrases such as in |'No 'way!| or in clauses like in |'I 'didn't really 'want to 'come'| but 'here I 'am|. The vertical lines indicate the boundaries of the tone units.

To illustrate what is said, look at this example |At 'five o''clock|. In this utterance, the tone unit is the whole phrase 'at five o'clock' where the syllable clock carries a tone, also called the tonic stress. The tonic stress is the strongest prominence that falls on the last stressed syllable (content word) in a tone unit. Some linguists refer to it as the nucleus, accent or nuclear stress (O'Connor & Arnold 1973). Therefore, the position of

the tonic stress makes an important contribution to our understanding of intonation. Actually, it is considered as the landmark of the rising and falling tones which is marked by two phonetic factors. Dorothy M.Chun argues that:

“The first phonetic factor is a perceivable pitch change, either rising or falling. The second is the presence of junctural features at the end of every tone unit. This usually takes the form of a very slight pause, but this pause is frequently accompanied by segmental phonetic modifications, such as variations in length and aspiration, that serve to reinforce it.”

(2002:53)

Said differently, the tone unit starts with a tonic and ends with a tonic. Notice these examples:

|He ‘felt un’easy’ |but the ‘others were en’joying them’selves|.

|’No], ‘only at the ‘meeting|.

Here we can easily detect where the tone unit is, since the rule says that the tone unit starts with a tonic No’, and ends with a tonic syllable, meeting

#### ***4.2.2. The Function of Tones***

Each level of tone has a specific function, or a meaning to convey. The choice of the tone is not done at random, but obeys to certain rules that may help foreign speakers to improve their pronunciation and achieve comprehensibility and intelligibility easily. Roach (2009) refers to it as the attitudinal function of intonation. It means that we can guess the attitude of the speaker from his use of the pitch. It indicates whether a speaker is asking or telling something, ordering or requesting etc.

### ***A. Falling tone***

First of all, the most common tone in British English is the falling tone which is used in a tonic to convey information in a statement, exclamations and WH questions. It is associated with the speaker's feeling, knowledge and authority.

- Statement:

|She 'thinks you 'haven't ↘ met.|

- Exclamation:

!' Put the 'gun on the ↘ 'ground!|

- WH questions:

|What time does the fill ↘ 'fi nish? |

### ***B. Rising Tone***

The rise tone has different functions that are considered as grammatical rather than attitudinal functions. It is used in general questions, encouragement and listing; however, in listing the last word bears a falling tone. The rise tone is associated with the speaker not knowing, thus has to ask.

- General questions

|Is it ↗cold?|

Are you ↗thirsty?

- Encouragement

It won't hurt.

- Listing

Blue, red, white or green

### C. Low Rising Tone

Low rising tone produced when the voice of the speaker rises during the tonic from a low to a medium pitch. It is generally used when a speaker answers a question. The response will have a low rising tone in order to express indifference, apology and greetings. In different cases, the speaker uses this tone in order to show uncertainty. It is also used in neutral situations where the speaker wants to disengage himself from a situation.

|It doesn't matter.|

(How was the exam?) | It was all right.|

|Excuse me|

(Where shall we go tonight?) |we may 'go to the cinema| (I don't care)

### D. High Rising Tone

The high rising tone falls on the tonic and is continued throughout the tail-if there is one-. The speaker's voice rises during the tonic from a medium to a high pitch. This pitch change is usually used in yes/no question (excluding wh questions).

Have you met her at the meeting?

### **E. Fall-rise Tone**

Fall rise intonation is an important tone that gives English its musical melody. It is a combination of a fall from high or mid tone to mid low or low, followed by a low-rise tone. It is when the voice of the speaker moves from fall and then rise. It is used to express uncertainty, doubt or request. In addition, in an utterance made of two-tone units, the first tonic has a fall rise tone used to express old information to back up the new information which is expressed in the second tonic with a falling tone (on the second tone unit).

- Old information

In your old ↘↗house there is enough room for five ↘persons

- Doubt

It's ↘↗possible

- Request

Will you ↘↗marry me

### **F. Rise-fall Tone**

Rise fall tone occurs when the voice speaker rises from a fairly low to a high pitch, and then falls to a very low pitch. The rise fall tone is used to express argument, denying responsibility, or defensive attitude, surprise or being impressed.

- Denying\_responsibility

It ↗↘really wasn't my fault

- Surprise

↗↘All of them                      You were here.

#### ***4.2.3. The contribution of Intonation in Achieving Meaning***

This section is regarded as the most important part of the thesis, since it proves that this suprasegmental feature carries different functions that contribute to achieve meaning and intelligible conversations. This point is sustained by Bolinger arguing that:

Intonation is important for who is speaking, for who will be taking the next turn, for how the act is to be understood (explanation, apology, challenge), for how the speaker will be evaluated (as an individual, as a native speaker, as a member of social class)—to mention only a few of the things that affect our roles as speakers and listeners.” (1985:338).

This quotation embodies the view that intonation is a meaningful feature that has a role which is central in an interaction. As a matter of fact it carries different kinds of functions which are essential at determining the nature of a conversation and the meaning of the utterances. Actually, the intonation patterns that characterize a stretch of utterance are used to send specific signals that express various information which lighten the meaning of the message (explanation or apology for example), and give a clear image of the speaker's identity and his intention (native or foreign speaker). Tench (1996) lists six major functions of intonation.



## 1. Organization of information

To start with, organizing information in an utterance is seen as the most important function of intonation. In an utterance we can distinguish between two kinds of information, *given* and *new*, yet one should be careful about the meaning of the terms. In fact, they are not a matter of what has already been mentioned or what has not, but refers to the importance of information. A *given* information is considered as obvious and not essential in the context; whereas, a *new* information is significant and more important than the others, since it is the aim or the focus of the message. This phenomenon is referred to as ‘information prominence’. In fact, these information are distinguished and determined by the use of pitch. English High pitch indicates that a syllable in a word is the most important and has a contrastive focus in an utterance; therefore, regarded as the new information. To be able to understand, take these examples:

**John** bought a red car. (Not David or Francis).

John bought a **red** car. (Not a blue or yellow one).

First, it is important to remember that it is impossible in English to put pitch accent on every word in an utterance. Therefore, we understand from the above examples that *new* information is associated with pitch, and *given* information are given no prominence. Second, it is also reasonable to note that pitch accent can be adjusted by the speaker, depending on his/her communicational needs. In fact, we understand from the first utterance that the speaker focuses his attention on ‘john’ in order to show that he is the one who bought the red car and not another person. Consequently, the *new*

information is John and the *given* is 'bought a red car', indicating that it is of marginal importance. This is achieved through several processes; dropping the pitch, narrowing the range of pitch, lowering the loudness, and finally increasing the speed.

It appears then that there is a logical use of intonation pitch accent in English. Important information are made to stand out and put at the top of the message by accenting them, whilst, obvious information is back grounded by deaccenting.

## 2. Realization of Communicative Functions

An equally significant aspect of the function of intonation is to realize communicative functions. It means that this suprasegmental feature is able to modify the function of an utterance by altering a simple statement to a question, request or an order. As a matter of fact, a speaker may use a statement to ask a question although the statement does not contain any word which indicates that this utterance is a question. In order to be intelligible to the hearer and show him that he is asking a question and not making a remark or an observation, he/she uses the right intonation pattern which is relevant to a question. These kind of utterance are referred to as (Morphosyntactically unmarked questions). In fact, their structure obeys to the syntax of a statement, yet their intonation patterns are peculiar to a question. To be able to understand, look at these examples:

1-John is coming to Algeria. (Statement; falling intonation)

2-John is coming to Algeria? (Question; rising intonation)

We can notice from the above examples that both sentences are morphosyntactically equivalent. Yet, if we use a falling intonation a simple statement will be uttered; however, if we use a rising intonation keeping the same order of items,

the utterance it will be interpreted as a question. As a result, we conclude that each function has its typical intonation pattern.

### 3. Expression of attitudes

The third function of intonation is related to attitudes and the speaker's state, which is quite complex to measure. First of all, before considering the attitudinal function of intonation, it is important to note that attitudes are a very complex area of study, since they are not only related to the psychological state of the speakers, but also to their emotions that affect directly the production of their speech. In fact, researchers find it difficult to analyze and measure attitudes of an individual compared to the linguistic and semantic sides of an utterance. As a result, it is very difficult to associate an attitudinal function with a particular intonation pattern. There is no one-to-one correspondence. Actually, an attitudinal meaning may be conveyed in a range of different intonation patterns, and an intonation pattern may have different meanings in different contexts, and according to different speakers.

However, we cannot deny the role of intonation to express attitudes. Researchers tried to make rules regarding the choice of tone that correspond to a particular attitude. Yet, they are considered as broad and not adequate in all situations.

<b>Tone</b>	<b>Attitude</b>	<b>Example</b>
<b>Rise</b>	-Encouraging	- It won't <u>hurt</u> .
	-Listing	- <u>Red</u> / <u>blue</u> / <u>yellow</u> / or <u>green</u> .
<b>Fall-rise</b>	-Uncertainty or doubt	It is <u>possible</u> . You <u>may</u> be right.
<b>Rise-fall</b>	- Requesting	- Can I <u>buy</u> it?

	-Surprised	-You were $\wedge$ <u>first</u>
<b>Fall</b>	Fially, definiteness	That's the end of the <u>news</u>

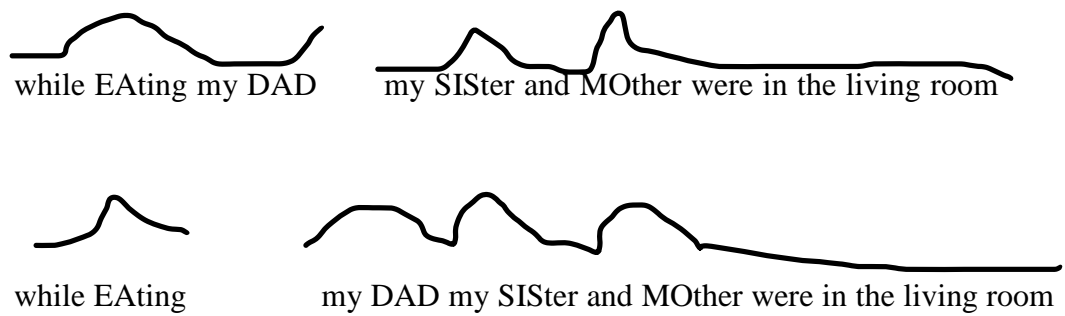
*Table1: Attitudinal Intonation*

To be able to understand, notice this example; ‘I want to buy a new dress.’ This utterance may be interpreted in different ways, depending on the pitch changes that may be used by the speaker. Actually, it may indicate that the speaker is happy, sad, impatient or angry. In addition, not only pitch changes are needed, but also other characteristics such as loudness, speed, voice quality, pitch rage (narrow- wide) and key (neutral pitch). Furthermore, paralinguistic variables like facial expressions, gestures, body movements and vocal effects (laughs) may also be necessary.

#### 4. Indication of Syntactic Structure

This function has to do with the grammatical function of intonation. Intonation is able to replace punctuation in an utterance. As a matter of fact, it is used as a punctuation marker to indicate grammatical units in order to help the listener understand what is uttered. Roach argues “Intonation is an important aid to the hearer in processing the audio input.” (1991:89). In fact, some utterances may be ambiguous; however, with the use of correct intonation patterns, they become clear and meaningful. For instance, “While eating my dad my sister and mother were in the living room”. In writing, in order to make this sentence unambiguous, we need to put a comma after “eating” and “my dad” to have “While eating, my dad, my sister and mother were in the living room”

However, when speaking, we would use intonation patterns which are equivalent to a ‘coma’ in order to avoid misinterpretations.



We notice that pitch changes occur when a comma is needed, and are potentially followed by brief pauses. If we put the comma in the wrong place, the meaning of the sentence will be altered. This is the same process for intonation patterns. If the pitch changes are wrongly used, the listener will not understand the intention of the speaker, which leads both speaker and hearer to frustration.

##### 5. Discourse Function

Another important function of intonation is the regulation of discourse which leads to successful conversations. Actually, it regulates the flow of a conversation and its behaviour by indicating the beginning and the end of speaking, or turn taking process. For instance, low pitch, reduced loudness, and rallentando (lengthening of turn-final elements) indicate the end-of-turn in a conversation with an air of finality.

*It was very succe s s f u l.*

In the above example we understand from the pitch changes (low pitch with lengthening) that the speaker has finished his utterance, and is ready to turn the floor to the hearer or somebody else.

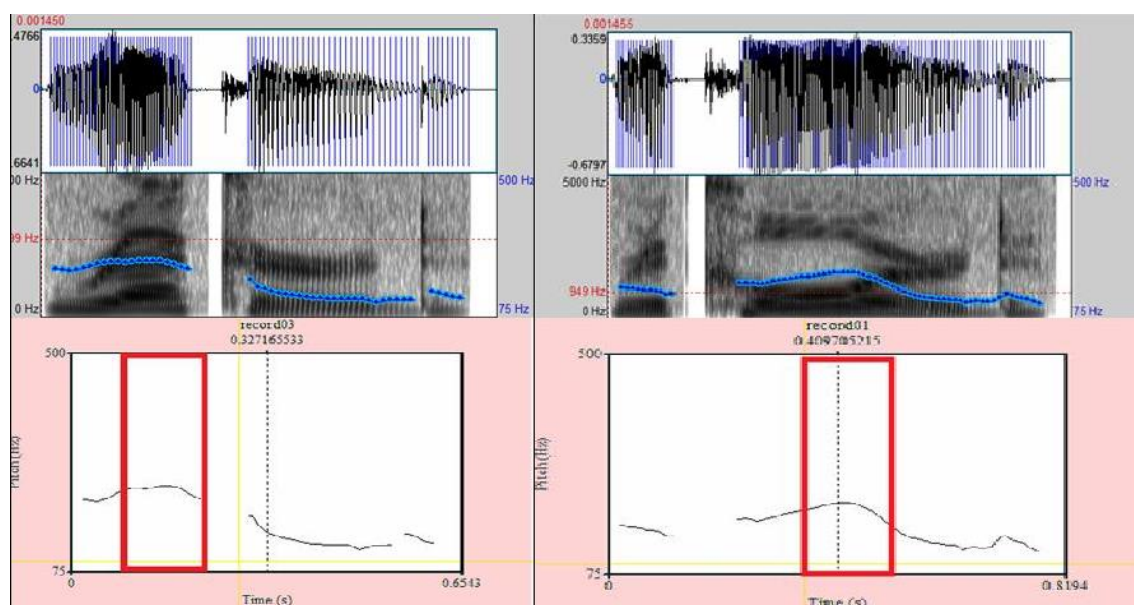
#### ***4.2.4. Analysing the Acoustics of Intonation***

Intonation has been previously mentioned and defined several times from the phonological aspect without examining it from the acoustic side which is very important in the prosodic analysis of intonation. In fact, having considered the structure of the tone units and their functions is not enough, it is also reasonable to look at its the physical, active or acoustic side. In this case a spectrogram is needed to analyze the utterances and pitch changes that occur in stretches of speech.

To start with, walls (1996) defined intonation as the vibrations of pitch responsible of the rise and fall of the voice. He referred to this phenomenon as the melody of speech. This point is also sustained by the work of Jones(2009) saying that intonation is nothing else but “variations which take place in the pitch of the voice in connected speech”. And, also, Roach (2009) who used the term *fundamental frequency*  $f_0$  to refer to the rate of vibrations which are physical, active and measurable. These vibrations are produced by the stretching and tensing of the vocal cords. When the vocal cords are tense they produce a high rate of vibrations resulting in a high pitch. And, when they are lax or the  $f_0$  equals zero (meaning no vibrations i.e. during a voiceless consonant or pauses) a low pitch is produced.

Therefore, pitch corresponds to the acoustic feature of frequency which is under the conscious control of the speaker. However, it is important to know that the fundamental frequency contour ( $f_0$  contour) is not continuous due to aerodynamic factors which are part of its overall shape. In fact, these factors or perturbations are responsible of the rise and drop of the  $F_0$  contours. For instance, high vowels and voiceless obstruent at the start of the following vowel tend to raise the  $f_0$ , whereas, Glottal stop and voiced consonant tend to drop the  $f_0$ .

To be able to understand the acoustic of intonation, pitch changes and the perturbations that are responsible for the rise and fall of F0, an example using a spectrogram, waveform and pitch contour of sound is necessary.



REcord

reCORD

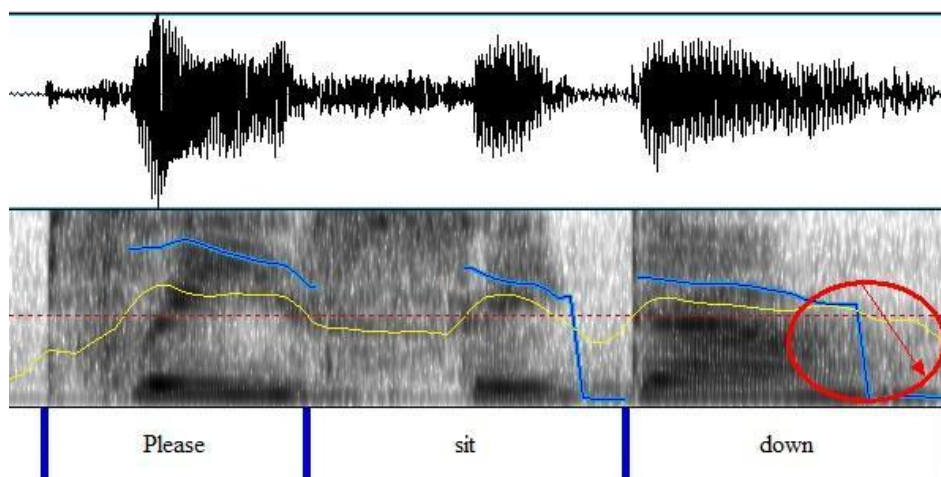
**Figure9:** Spectrogram/Pitch countour/waveform of record(v.n.)

The above figure shows three kinds of acoustic analysis. First, at the top, is a waveform which indicates the greater intensity of the stressed syllable. The second shows the higher pitch shown in the pitch track. And, at the bottom, the spectrogram that indicates the greater length of the stressed syllable.

This example analyses the word record(noun) /'rekɔ:d/ and record(verb) /rɪ'kɔ:d/. To start with, the word record is divided into two parts, re.cord. In the first one (the verb); the stress falls on the second syllable /rɪ'kɔ:d/. Therefore, the pitch is falling down in the syllable /re/, while in the second syllable /cord/, the pitch is rising, especially in the part of the vowel. This is perfectly visible on the figure. In fact, the waveform indicates intensity in the stressed syllable and the pitch is rising and then falling on the

unstressed syllable. However, in the second word (the noun) record /'rɛkɔ:d/ where the stress falls on the first syllable, we can see that the duration of the syllable /kɔ:d/ is longer than the first one. In addition it is higher with a rise/fall tone. In short, these methods of analysis are the best tool to capture all the characteristics and features of speech.

Having considered the analysis of lexical stress, it is also reasonable to look at the acoustic analysis of English intonation. To do so, we analyzed an imperative statement which is characterized by a falling tone. |Please sit down.| ↘



**Figure10:** Acoustic Analysis of <Please Sit Down>

This figure shows two acoustic analysis of the utterance ‘please sit down’, ordering someone to sit down (imperative statement). The top analysis is a waveform, showing the intensity of the stressed syllables. The bottom analysis is a spectrogram which shows how the resonance and other acoustic elements are evolved and changed. The sentence has been added to show which parts of the signals correspond to which linguistic element.



In this analysis the general trend of the pitch is clear. It is represented in the graph with the blue colour. The utterance is characterized by a falling tone. It begins with high fall tone on 'please', also falls on sit, then sharply falls on 'down' and thereafter stays low and level.

#### **4.3. The Intonation of Declarative Questions in English**

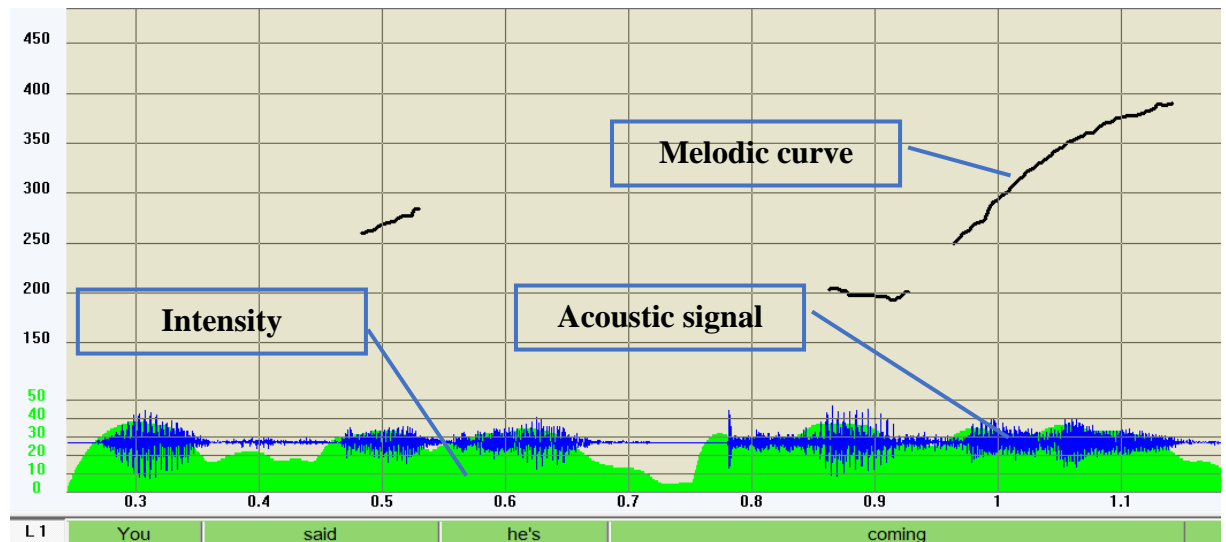
In general, declarative questions, or 'queclaratives' (coined by Sadock 1974) are morphosyntactically unmarked questions. In other words, they are simple statements without inversion and which do not have formal markers of interrogatively (wh-word), but employed as questions. They have the structure of a declarative sentence, yet under certain circumstances imposed by the context, adopt the function of a question (With the presence or absence of a question mark). The only way to distinguish whether it is a declarative statement, or an interrogative one, is by using intonation (Quirk et al. 1987:392; Huddleston 1994:428). Said differently, their structure obeys to the syntax of a statement, yet their intonation patterns are peculiar to a question, more precisely, to polar questions- yes/no questions. According to the 'British tradition' and textbooks, queclaratives are characterized with a terminal rising pitch movement. "Complete statements said with the high bounce [a high rising contour] have the effect of questions in most cases." (O'Connor & Arnold, 1973: 75) cited in Geluykens (1988). To be able to understand, look at this example:

1. You said he's coming. (Statement; falling intonation)
2. You said he's coming? (Question; rising intonation)

We can notice from the above examples that both sentences are morphosyntactically equivalent. Yet, if we use a falling intonation a simple statement will be uttered. However, if we use a rising intonation keeping the same order of items, the utterance will be interpreted as a question. Therefore, a rising intonation contour is

an important key, or feature which helps distinguish the function of the sentence. Gunlogson (2001) states: “A familiar use of rising declaratives is as a kind of polar question” Consider the following example using Winpitch acoustic analyser:

➤ You said he’s coming?



**Figure 11:** Example of a declarative question in English.

Cruttenden (1989) argues that declarative questions contour: “is invariably reported as having either a ‘terminal rise’ or in some way a higher pitch than the corresponding statement pattern” (p.162). Shortly afterwards, he criticised this point of view by stating that a rising contour is not always representative of declarative questions intonation. In fact, he considers this view as a naïve or an exaggerated interpretation of intonation for those kinds of utterances. Said differently, associating a rising terminal contour with a declarative statement does not automatically function or produce a question. This argument is also sustained by the work of Bolinger (1972:27) who argues that: “rising intonation is associated with signalling a more general function than question function”. The sentiment embodied in this quotation is that rising contour terminal is not representative of declarative questions, and this type of question can be associated with a variety of contours. As a matter of fact, he also adds that “a simple

rise is associated with all forms of incompleteness, and while incompleteness includes interrogation, it is not limited to it". (Cited in Weber 1993).

As a result, according to Bolinger (1972), a falling intonation can also be used as an alternative to represent the terminal intonation contour that signals declarative questions. In fact, Stenstrom (1984: 154) conducted a study on the relation between rising and falling intonation in declarative questions, and discovered that falling intonation contour are more frequent than the rising ones (174 vs 52 occurrences in her corpus).

This position is also sustained by Geluykens (1988). He conducted a study on 216 spontaneous British-English polar questions (156 yes-no questions and 60 declarative questions). The results of the investigation show that: "There is no justification for regarding rising contours as the unmarked pattern for polar questions" (1988:468), and: "In queclaratives, a falling intonation is by far the most frequent pattern, mostly accompanied by a step-up in pitch in the head of the tone unit. [...] In all, the claim that rising intonation is the 'normal' pattern for polar questions lacks empirical justification" (1988:467).

#### ***4.3.1. The Function of Declarative questions in English and Oranee Conversations***

Declarative questions carry different functions when used in conversations or everyday speech. Actually, they embody at least three major functions, even in Algerian Oranee dialect.

1. To check some piece of information.

Mohamed rah ye-gra ?

MOHAMED IS.PROG.3PS SG.M-STUDY

Mohamed went studying?

محمد راح يقر

/moḥamed raḥ yeqra?/

2. To repeat all or part of something that has already been said for the purpose of questioning or confirming information

**Lydia:**

kan and-i test lioum, kan s3ib besef.

SBJ.PST. HAVE-1SG TEST TODAY PST.3.SG DIFFICULT A LOT

I had a test today, it was very difficult.

كان عاندي تيست ليوم، كان سعيب بزاف

/kan ʕandi test lioum, kan sʕib bezef/

**Ali:**

kan and-ek test?

SBJ.PST. HAVE-2SG TEST

You had a test today?

كان عندك تاست؟

/kan ʕandek test?/

3. To show surprise, amazement, or annoyance what was just said

**Lydia:** samhili, kamel here-s kas-e-k

SORRY KAMEL BROKE-3SG CUP-3SG-POSS

Sorry, Kamel broke your cup.

/semḥili, kamel heres kasek./

**Lila:** Kamel heres kass-i?!

Kamel KAMEL BROKE-3SG CUP-1SG-POSS

Kamel broke my cup?!

!كمال هرس كاسي؟

/kamel heres kasi/

It is also important to note that declarative questions are used in cases where the statement talks about the internal state of another person. These utterances are more likely to be question prone rather than statement prone (Geluykens, 1987). To be able to understand, take the following example: <You feel good>. This utterance is more likely to have an interrogative intent, since we can not guess whether a person feels good or bad. On the contrary, <I feel good> is certainly a statement, because an individual can not ask his/herself if they feel good.

#### **4.4. Melodic Contour Categories: A prosodic Analysis**

The actual study follows a prosodic analysis established by Philippe Martin's (2015-2016) work, which concerns the determination of melodic contours of stressed syllables in the tone units and their dependency relation. In his work, Martin (1981) proposes a theory of intonation in which the melodic contours associated with the stressed syllables are organised in a hierarchical structure. The form of those contours is directed by the mechanism of "Contraste De Pente" (pitch slope inversion). That is to say, his model proposes that the selection of contours in an utterance depend on the final contour; therefore, the assignation of the melodic movements is realised by the principle of pitch slope inversion (contraste de pente). Martin (1987) argues:

In French, syntactic relations are very often indicated by morphological markers such as the number and gender of the adjective, the number and person of the verb, etc. Similarly, if the existence of a prosodic structure is assumed, prosodic markers must exist to indicate the relations existing in the sentence between prosodic words. These markers can be found on the stressed syllable of the prosodic word and function merely through

contrasts of melodic slope between the contours of the prosodic words involved in the relation of selection. (p.929)

According to him, there is a relation of dependency between the tone units. In fact, a rising contour, referred to as « continuation majeur » indicates a dependency relation with the terminal contour “contour terminal conclusive”, which is low. Thus, a hearer perceiving a rising contour “continuation majeur” will wait for a continuation or a terminal contour. All these melodic contour relations function toward the “right” sense of the contours sequence, forming the prosodic structure which organises the tone units.

Said differently, a prosodic structure is defined as a hierarchy of fundamental units which are called “groupes accentuels” or “tone group”. A group represents a sequence of syllables, where only one syllable is stressed. The stressed syllables are characterised by special melodic contours which indicate an independency relationship between the accented groups. These relations indicate the prosodic structure. Likely, in Crystal’s theory (1969), this accentual group is labelled “tone unit” (see section 2.1.1). This tone unit is the basic unit for prosodic analysis. It is composed of four elements; the head, the pre-head, the tonic, and the tail. We have seen so far that the tonic, which is the last stressed syllable, is the most important part in the tone unit since it bears the pitch changes.

Second, “the head” begins from the first stressed syllable until the last unstressed syllable before the tonic. Said differently, it is made up of all secondary stressed syllables, stressed and unstressed syllables that comes before the tonic. |He 'wanted to 'face the 'problem on 'Monday.| In this example, ' *wanted to' face the 'problem on* is the head which includes all the stressed and unstressed syllables before 'Mon the tonic. The head can be

optional in a tone unit for instance; |I a 'gree|. In this example there is no head, but only a pre-head which is followed by a tonic.

The pre-head is another component of the tone unit. It constitutes all the unstressed syllables at the beginning of the tone unit before the first (secondary) stressed syllable. |He 'wanted to 'face the 'problem on 'Monday|. Evidently, in this example the pre-head is *he*, because it is an unstressed syllable which is at the beginning of the tone unit before the first stressed syllable '*wanted*

Finally, the last part of the tone unit which is the tail. It refers to any syllable that follows the tonic up to the end of the tone unit. It is closely related to the tonic. Actually, the pitch changes of the tonic will determine the pitch changes of the tail.

Coming back to Martin's prosodic analysis (2016), he distinguishes four different melodic contours:

**C0:** "Le contour terminal conclusif", which represents the full stop or the end of a sentence. It is a contour placed in the last stressed syllable. It is quite easy to determine this contour perceptively. In fact, when heard, the hearer understands that is the end of the statement, and there is no continuation.

**C1:** The major continuity contour, with a rising tone. Unlike, the C0 contour, the hearer waits for a continuation of the statement when the segment ends with a C1 contour.

**C2:** The minor continuity contour (with a falling intonation). Perceptively, the contour shows that it is not the end of a statement, but the hearer waits for a continuation which ends with a C1 contour, with a rising intonation.

**Cn:** Neutralised contour, with a slightly rising or falling intonation. The hearer waits for a continuation, whether with a C2, C1 or C0 contour.

Acoustically, in order to distinguish between those melodic contours, it is possible to use the glissando, or 'le seuil de glissando'. It allows establishing from which moment a melodic movement can be perceived as rising or falling or, in all cases, as different from a static of flat tone. In other words, it is regarded as a melodic height change.

Generally, C1 and C2 contours are both superior to the glissando threshold; whereas, Cn contour is inferior to the glissando threshold. In fact, it does not vary quickly enough to perceive the variation. Thus, the tone is flat for  $\frac{2}{3}$  of the variation to  $\frac{2}{3}$  de 100 à 130.

#### **4.5. Conclusion**

Thus, the study will follow the present prosodic analysis, annotating the stressed syllables to melodic contours of the Oranee dialect in declarative question. The reason behind the choice of this theory is that there exists a dependency relation between the melodic contours forming the tone units of the Oranee dialect. In fact, Benali (2015) discovered in his study that in order to realise a final rising contour to produce polar questions, the preceding contour of the preceding tone unit should have a falling melodic contour in the stressed syllable; otherwise, the production of polar questions is not perceived.



## **Chapter V**

# **The Linguistic Situation in Algeria: Intonation and Meaning**

## **Introduction**

The actual language situation in Algeria is characterized by its geographical and ethnic diversity, in addition to the various historical events which participated to its linguistic richness. Consequently, different languages and language varieties are spoken across its territories. One should know that the language spoken in Algeria is Arabic; however, no one speaks the classical or the pure language of Arabic. In fact, each speech community in the county speaks different varieties of Arabic, also referred to as dialects of Arabic. Those dialects are mutually intelligible, yet, have distinct systems. In other words, differences in their pronunciation, lexis, syntax etc., might be observed.

Initially, a description of the Algerian language profile is presented to provide a distinction between its languages and dialects. Then, the position of the French language is highlighted, since it is considered as the second language of the country, spoken and used in various formal domains. Lastly, a linguistic background of the Standard Arabic intonation is provided.

### **5.1. A Short Distinction between Classical, Modern Standard and Algerian Arabic.**

In this section, a short comparison of classical, modern and Algerian Arabic will be discussed. In fact, following the purpose of the study, it is important to distinguish between these language varieties. Yet, the actual research concentrates particularly on a specific variety of Algerian Arabic, which is the Oranee dialect (ORD).

#### **5.1.1. *Classical Arabic vs Modern Standard Arabic***

Standard Arabic (SA) is a denotation which refers to the standardized variety of Arabic, used for both written and spoken purposes in a peculiar context: formal situations. In fact, it acquired the status of the official language in different countries like Algeria,

Morocco. However, it is important to note that there is no community of native speakers which has SA as a mother tongue, since it is not acquired at home.

We distinguish two forms of SA; Classical Arabic (CA) and Modern Standard Arabic (MSA). Yet, the differences between them are not so considerable. According to Bentahila (1983) the two varieties are relatively similar and share the same rules, and are both referred to as “*al arabiyya alfus’ha*”. “eloquent Arabic” However, the only distinction between them is that, CA is the codified version of Arabic which is considered as sacred, since it represent the language of the Holy Qur’an, which remains the only source of the use of CA. MSA on the other hand, is a form of Arabic which has emerged in the nineteenth century, and regarded as a simplified version of CA. In other words, it is the modernised form of CA, which meets the needs of the actual modern life.

### ***5.1.2. Algerian Arabic vs Oranee Dialect***

Algerian Arabic (AA) is a variety of SA, spoken among the Algerian speakers in Algeria. It is referred to as the “Darija”, dialect, and regarded as the native language of the majority of the population. It shares several characteristics and properties with SA, but also differs at different levels; phonological, syntactic and morphological levels. AA system is influenced by other languages in contact. Various items are found borrowed from Portuguese, Spanish and Turkish. Also, AA is not codified and is restricted to the oral use. However, recently, the young generation started writing this dialect using either Arabic or Latin script, especially in social media.

According to Benrabah (2007): “Spoken Arabic in Algeria [...] is spread over four major geographical areas each with its own linguistic features” (p. 85). As a matter of fact, these geographical areas gave birth to varieties of AA within Algeria. For example: Oranee dialect, Algiers Dialect, Aannaba Dialect, and so on... Therefore, those

dialects have the same language, yet they do not share all the linguistic features. For example, they do not have the same accent, and their vocabulary may differ.

This study focuses on the Oranee dialect, spoken in Oran. A town situated in north-west of Algeria, around 270 km from the Moroccan border. The next section provides a short linguistic description of the dialect, highlighting its characteristics which make it different from the other Algerian dialects.

#### ***5.1.2.1. A Brief Description of the Oranee Dialect: A Phonetic Inventory***

As mentioned previously, the ORD is a variety of AA born under certain circumstances. In fact, it is believed to be a Bedouin-based urban koine, arising out of a mixture of dialects brought into the city by immigrants coming from different areas of Algeria (Miller 2007: 10; Labed 2014: 298). According to Ferguson (1959) Arabic koine is a result of a mixture between mutually intelligible Arabic varieties and unintelligible languages. Thus, ORD is the result of various contact languages, like Turkish, Spanish and French. In this section, a brief lay out of the most salient linguistic features of the ORD are presented following Guerrero's (2015) description. The reason behind the present description is to differentiate this targeted dialect from the other regional varieties of AA for the research purposes.

Generally speaking, the genealogical affiliation of a given dialect rests on a set of many linguistic features within the fields of pronunciation, grammar and vocabulary (Labed 2014:99). This section concentrates on the lexis and phonetic aspects of ORD only. There is no need to discuss the grammatical side of this dialect due to the objectives of the research.

As far as vocabulary is concerned, ORD is characterised by a large amount of borrowings from different languages. According to Guerrero's (2015) corpus, several

loan-words are borrowed from Spanish and also Berber. For example: /būr̥sa/, plastic bag (Sp.*bolsa*). In addition, it shares various lexical items with Moroccan dialects. For instance: /malək?/ what is wrong with you?.

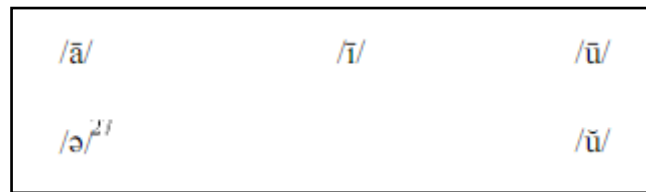
Yet, this dialect contains many words and adverbs which are typical to it. In other words, they represent this language variety among the others. Those items are used only by the Oranee speech community. For example: /ġāya/, good, well. /čīta/, monkey. Among the most characteristic adverbs are: /nīšān/, straight; exactly. /dār̥wāk/, now. /l-bār̥əḥ/, yesterday.

Concerning the interrogatives, the following are of interest: /wīnta/, when. /qāysāš/, at what time. /wīn/, where/ /šāwāla/, what. /šah/, what. /ʕlāš/, why. /ki/, how. /škūn/, who. /šhāl/, how much. (p.230).

Another important aspect of the ORD is its phonetic system. Unlike some southwestern Algerian dialects and especially the Moroccan one, the ORD does not contain cases of consonant harmony in words (stems) which have sibilants sequences. To be able to understand, take the following example: /zūž/, two (never /žūž/ ). /šəms/, sun (never /šəmš/). Also, another noteworthy feature is the absence of the interdental fricatives. In fact, the three CA interdentalals have merged with the corresponding stops, / t̪ / with /t/, / d̪ / with /d/ and / ɖ / with / ɖ / . Examples: CA: /taʕlabun/ > ORD: /tāʕlāb/ fox. CA: /dirāʕun/ > ORD: /d̪rāʕ/ arm. CA: /dahr̥un/ >ORD: /d̪hār/ back.

In addition, many of the old short diphthongs ( ay , aw ) have been monophthongized to ī and ū , e.g.: CA: /šawkun/ > ORD /šūk/ thorn; /baytun/ > ORD /bīt/ room. Yet, these diphthongs are often kept when followed or preceded by pharyngeal or uvular consonants, CA: /xaymatun/ > ORD /xāyma/ tent. CA: /bayḍun/ > ORD /bāyḍ/ eggs.

Coming to the vowel system, the ORD is based on five vowels, two short and three long system /ā/, /ī/, /ū/, /ə/, /ǔ/ (ibid.223)



**Figure 12:** The Oranee Vocalic System

There also exist various phonetic phenomena which characterises the dialect of Oran. The most frequent ones are: Guerrero (2015:279)

- Metathesis: CA: /qabaḍa / > ORD /gḍəb/ he held, CA: /šāra/ > ORD: /šra/ it happened.
- Occasional assimilation: /wəžhi/ > /wəžži/ “my face”
- Occasional dissimilation: /zəlzla/ > /zənzla/ “earthquake”
- Voicing: /ħərrəs rühək/ > /ħərrəz rühək/ “watch out!”
- Occasional shift from /l/ to /r/: /ṭāžīn māləḥ/ > /ṭāžīn mārəḥ/ “a salty stew”
- /h/-dropping: /mərṭāh/ > /mərṭa/ “his wife”
- /r/-dropping in fast speech: /rāni nākūl/ > /āni nākūl/ “I am eating”

To sum up, the purpose of this section is to distinguish linguistically the dialect of Oran from the other regional dialects spoken in Algeria. Thus, according to Guerrero’s (2015) description, it is a variety driven from the Bedaoui language like the Moroccan one, and not a pre-Hilali urban variety, like the dialect of Tlemcen (A town situated in north Algeria).

### **5.1.3. Modern Standard Arabic Intonation**

Intonation is a supra-segmental feature and an important characteristic of all languages that plays an important role in conveying meaning. In fact, it can modify the function of an utterance by altering a simple statement to a question, request or an order.

In addition, the speaker uses this feature to convey various connotations and feelings to the interlocutor. Before considering the practical part of the work, it is important to look at the characteristics of intonation in Classical Arabic (CA).

The first Arab linguist who introduced the concept of intonation in Arabic was the twentieth-century grammarian Ibrahim Anees (1999). In fact, until the middle of this century, literature of Modern Arabic Linguistics flourished and suggested that intonation in Arabic has an important role in conveying meaning of utterances. Ibrahim Anees describes it as *موسيقى الكلام / mus̄-iqa al-kall̄-am/*, “The music of language”. However, he did not afford a concrete description of the Arabic intonational system, until the appearance of the grammarian Tammam Hass̄-an work (1990, P. 164–170), who provided a description of Classical Arabic intonation. However, this work is unfortunately unfulfilled. As a matter of fact, the linguist describes intonation based on a four tones system: high tone, low tone, variant tone associated with stressed syllable and invariant tone associated with unstressed syllable, without illustrating how the aforementioned provides the contour system of the actual language.

Recent work has been carried out on the intonational system of CA which is more revealing. Actually, Rifaat (2005) conducted a qualitative study based on a number of sentences retrieved from a 15-hour recording from two local radios which use CA as a language of communication. The results of his analysis show that CA has a simple intonational system. More precisely, the system is limited to basic aspects of intonation. That is to say: “tendency of pitch accents to be accentuated, a basic declined trend line tune, association of non-final or continuation tunes with rising trend line or rising pitch accents, and a limited use of pitch accents span to denote ‘focus’ (58: 2005).

Having considered the intonation system of CA, it is now possible to look at the intonation of CA variations- dialects. Prior literature on the intonation of spoken Arabic

dialects is still relatively limited, but in recent years a growing number of descriptions of individual dialects have been published. For example, Norlin (1989) presents a description of Egyptian Arabic on how information instruction is expressed intonationally based on focus. Accordingly, the focus in an utterance denotes the concentration of attention on a particular element of the message. In other words, it denotes the important or the most informative part in an utterance that the speaker presents. The prefocus elements refer to the item which comes before the focus word, and the post focus items represent the elements which come after the word which is focused. (Wells, 2005). Therefore, the study conducted by Norlin (1989) reveals that:

“The pitch range of the focused item is expanded, its F0 is higher, the pitch range of the post focus item(s), if any, is compressed, and the pitch range and the F0 of the prefocus item(s), if any, remain neutral. These findings, while preliminary, suggest that focus is expressed intonationally in this vernacular”.(Norlin 1989, cited in A. Alzaidi 2014).

Another aspect which is worth to tackle is the difference of the intonational systems of Arabic dialects. Although they share the same language, their intonation varies. In fact, Ghazali et al. (2007) conducted an experimental study where he compared six different dialects. The results show that intonational variation is present across Arabic dialects. In addition, he suggests that there is a potential association of pitch accents to its metrical head, or whether both heads and edges or just edges of prosodic constituents are tonally marked.

Concerning the intonation of the ORD, Benali (2015) initially conducted a study on the occurrence of stress. He argues that: “stress falls on the final syllable if it is the only heavy syllable in the word (V: or VC), or if it is superheavy V:C(C) or VCC.



Otherwise the penultimate syllable is stressed.”(p.2). Shortly afterward, Benali (2016) tried to compare the prosody of focus in Algiers and Oran varieties. According to his acoustic analysis, he discovered that there are two prosodic patterns observed in two types of focus; emphatic focus and interrogative focus, which differentiate both dialects. In fact, speakers of Oran tend to produce a melodic rise in their final syllable, while those from Algiers produce a falling tone in the final syllable, forming a bell on the last word

The present study is dedicated to the Algerian Oranee dialect, which is a variety of Arabic spoken in Algeria. It seeks to describe the intonational system of a particular sentence construction- more precisely, in questions that are morphosyntactically unmarked.

#### **5.1.4. The Position of French as a Second Language in Algeria**

During French colonialism in Algeria in the twentieth century, the French authorities attempted to introduce the Western modernity and economic progress, and one among those projects was to promote and spread the French language across the Algerian territory. In order to achieve their mission, they restructured the Algerian educational system, by introducing French in Algerian schools. Consequently, the French language dominated not only schools but also the public sector. All the governmental and public institutions functioned in French. Therefore, the Algerian population were obliged to master this language as a second language in order to have an educated and professional status.

The results of this reform are until now present in Algeria. French has a prominent status and is stucked to the linguistic repertoire of its speakers. Actually, the French language is always maintained as a tool of expression and education. It is taught in schools very early (starting from the primary school), and used in private and higher education,

business, media, science and especially in technology. French has become a tool of communication which provides Algeria modern ideas and relations to modernity and Western models of technological, scientific and economic flourishing. As a result, this language is considered as the second language thought and learned in Algeria, after Arabic.

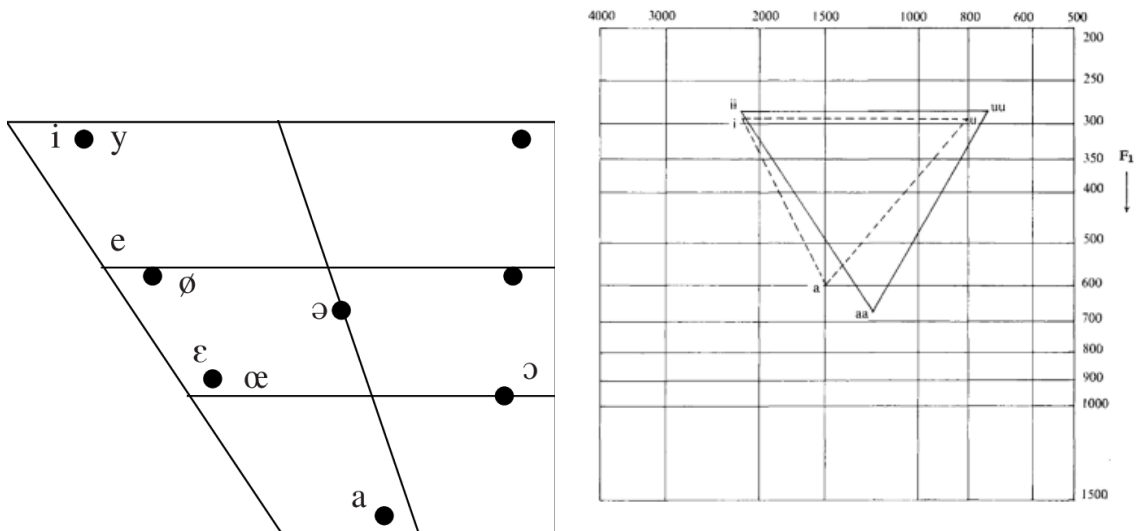
Nevertheless, French is given no official status and is not mentioned in the Algerian Constitution. In addition, during the last years, the language started losing its status as a tool of communication, due to the massive spread of English as the « international language ». As a consequence, the young generation of Algeria start adopting English and the impact is felt in the acquisition of the French language. It can be observed that the level of French is highly decreasing among university students compared to those of the old generation (Bouhadiba 2002).

Nevertheless, French has consequently impacted the Algerian dialect used in Oran. We can find various borrowings and language interference in the Oranee speech. The next section will give a highlight on the similarities and differences that exist between both languages. The aim of it is to explain language transfer and its impact on the Oranee dialect.

#### ***5.1.4.1. A comparison between the French and Oranee Phonetic inventory***

If we consider the vowel system of AA and French, it can be noticed that the fundamental difference between them is that AA counts only oral vowels, while French has also nasal vowels /ã/ /ẽ/ /õ/. In addition, AA has a limited number of vowels with three vowels /i, a, u/ which might be short or long to express contrastive meaning in grammar. At the contrary, French has a richer vocalic system with open and mid open vowels / e, ε, o, ɔ/. Ghlamallah (2018) assumes in her study that: “words having /Λ/ such

as money are either realised with [a] if the transfer is from Arabic or [o] if the transfer is from French”. Since AA does not have the sound /ʌ/ in its vocal system, learners tend to borrow their existing sound system of their second language which is /o/. Consider the following diagrams.



**Figure 13:** The French Vowel vocalic system on the left (Fougeron & Smith, 1993) vers the AA one on the right (Al-Ani, 1970, p.25).

Havin considered the vowel systems of both languages, it is now reasonable to tackle their consonantal aspect. It can be noticed that Algerian Arabic has more consonants than French. In fact, /y/ and /w/ are considered as consonants in AA, since they can be geminated. They share twenty common consonants and the consonant inventory of AA contains all French consonants. The only difference between those languages at the consonantal level is the existence of the nasal sound /ɲ/ in French and not in AA. Concerning /p,v,g/ sounds, they do exist in AA, yet considered as borrowed from French and other European languages. Figure 13 represents the shared consonants between those languages.

French	Bilabial	Labio-dental	Dental	Palato-alveolar	Palatal	Velar	Uvular
Plosive	p      b		t      d			k      g	
Nasal	m		n		ɲ		
Fricative		f      v	s      z	ʃ      ʒ			ʁ
Lateral approximant			l				
Central approximant					j	w	

**Figure 14:** Shared French and Algerian Arabic consonants (AMAZOUZ, 2019, p.3)

The present study deals with the intonation of Oranee speaking while speaking English. Therefore, it would be reasonable to tackle this aspect as far as French is concerned. In fact, it is regarded as the second language of Oranee learners since it is taught directly after AA, which is their mother tongue. English comes at the third position. Therefore, their performance could be highly influenced by French. Glamallah (2018) argues: “In the English pronunciation of Algerian students, we find recurrent and common phonetic/phonological aspects caused by Crosslinguistic Influence (CLI) from the previously acquired languages, and that makes it an Algerian English pronunciation” (p.1).

French intonation is slightly different from English intonation. It is characterised by a falling tone. It starts at a higher pitch level and starts falling consequently throughout the utterance. English on the other hand respects a peculiar intonational process which consists on putting a high pitch on one stressed syllable (accordingly the word) in an utterance and lower the others (see chapter IV). In French, intonation rises only when it comes to yes/no questions. “Prominence is not lexically driven in French (there is no lexical stress), but it is determined by prosodic phrasing” Delais-Roussarie (2000) (as cited in Beyssade & Marandin, 2006, p.1). Therefore, those information should be taken into account when conducting the actual study.

### **5.1.5. Conclusion**

To conclude, this chapter is a theoretical basis which tackles the phonetical and phonological aspects of Algerian Arabic language, which is the mother tongue of the research informants. In addition, it deals with the position of French in Algeria and its impact on Oranee speakers of English. The chapter highlights the phonetic aspects of French which are considered are influencing elements in the creation of an Algerian English pronunciation. The next chapter is the experimental part of the study which tries to answer several research questions in relation to learning English as a foreign language by Oranee speakers. In fact, one on the prominent research question is whether the realisation of declarative question by Oranee leaners is influenced by French intonation system.

**Chapter VI**  
**Research Methodology**

## **Introduction**

The present study deals with the RP English prosodic feature: intonation produced by EFL Algerian learners. More precisely, it concentrates on speakers of Oran dialect, which is a variety of Algerian Arabic. The first purpose of this research work is to describe the Oranee dialect intonation. More precisely, it provides a characterisation of the used melodic contour to express declarative questions in read and spontaneous speech. The aim and the results of this first step will allow conducting the comparison between the production of English intonation by British English users and non-native Oranee learners of English. Finally, the second part of the research concentrates on testing the efficiency of two teaching intonation methods: a distracted imitation task versus the visualization of a video with an instructor explaining the articulatory features declarative questions. Thus, the study raises the following questions:

1. Are Oranee Students aware that pronunciation plays a crucial role in communication performance? What is their motivation.
2. What are the prosodic features (namely F0 movements of the interrogative contour in declarative questions) of Oranee English intonation in read speech?
3. What are the differences and similarities of Standard English intonation and Oranee English intonation in terms of terminal pitch movements of declarative questions? In other words, what does characterise this non-native intonation of English in this context?
4. Are there any factors influencing the intonational production of Oranee learners?  
(Mother tongue: Oranee dialect, or Second language: French)

5. Are videos and awareness raising with the help of hand gestures as efficient as imitation regarding the acquisition of English declarative questions for Oranee learners?

Before conducting the study, it was important to evaluate the informants' knowledge about the suprasegmental features. The purpose of the questionnaire is to see whether students are interested and motivated in learning pronunciation and if they are aware that it has an important role in the production and perception of speech and, that it is a major factor that leads to the intelligibility of speech. It also helps looking for the root of the pronunciation problems and gives us an explanation about the students' poor performance.

In order to achieve the research objectives, a descriptive research procedure was implemented to afford a characterisation of the F0 movements of the interrogative contour in declarative questions of Oranee English intonation. The last question related to the efficiency of the aforementioned learning methods in learning those intonational aspect of declarative question was tackled using micro qualitative experimental research procedure. The collected data will be analysed using Winpitch (Philippe Martin, 2016) as a visual technology to annotate the stressed syllables and determine their melodic contours.

The reason behind this research experiment is that Algerian Arabic speakers often struggle in communicating in English and transmitting the correct message due to their poor pronunciation. The interference of their mother tongue might be a suitable explanation to the latter problems. Therefore, a characterization of the ORD intonation in declarative questions is essential in determining the informants' English productions. Avery and Ehrlich (1992) claimed that the interference of sounds of the mother language influences the production of speaker's foreign sounds, thus the speaker is perceived as



a nonnative speaker. This might be considered as a first hypothesis related to the influence of the mother tongue melodic contours in the English production of the EFL learners. A second hypothesis goes that there is no interference of the the Oranee dialect and both intonational systems of the ORD and English in declarative questions are the same. Finally, as French is the second language in Algeria, it could be possible to find some traces of the French prosodic system in the informants' realizations.

Finally, the reason behind the choice of the distracted imitation and the audio-visual explanation methods is related to their neurological function and the way they adapt their techniques to the human brain learning process. The first one is based on the efficiency of mirror neurons, an innate characteristic of language learning. Whereas the second learning method is based on phonetic awareness which helps understanding that words are composed of units such as syllables, segments, onsets, rhythm and also, intonation and stress.

The sixth chapter regroups the experimental study and research methodology used to fulfil the thesis objectives. It aims at answering the research questions mentioned above by following a particular research methodology. The first section presents the participants or informants of the study, in addition to the material and the research corpus. The aim of the first section is to afford a description of the prosodic features of Oranee English intonation in read speech and the factors influencing the intonational production of those speakers. Therefore, the results of this research are presented and discussed. It also, provides the used methodology for conducting a micro qualitative experimental research procedure which tackles the efficiency of two teaching intonation methods involving Wrembel's framework: a distracted imitation task versus the visualization of a video with an instructor explaining the articulatory features declarative questions. Results and discussions are highlighted in the last chapter.

## 6.1. Participants

The present paper is based on a micro qualitative experimental research procedure administered to a sample of eighty Arabophone speakers, who originate from Algeria and live actually in this country. They are all native speakers of the Arabic language, more precisely, of the Oranee dialect, since it is their mother tongue. In addition, they are students from the English department at the University of Mohammed Ben Ahmed Oran 2, Algeria. These informants majored in BA English and seem to have a satisfactory command of the language after a number of years studying it. Finally, they have no language pathology, and their ages vary from 21 to 25. It is important to mention that the choice of the students who were willing to take part in the research was at random. Before beginning the investigation, the questionnaire and the recordings, the students were informed about the research without influencing their natural performance

NB of informants	Male	Female
80	42.5 %	57.5 %

*Table 2:* Participants

## 6.2. Research Materials

### 6.2.1. Questionnaire

Before conducting the study, it was important to evaluate the informants' knowledge about the suprasegmental features. The purpose of the questionnaire is to see whether students are interested and motivated in learning pronunciation and if they are aware that it has an important role in the production and perception of speech and, that it is a major factor that leads to the intelligibility of speech. It also helps looking for the root of the pronunciation problems and gives us an explanation about the students' poor performance. The questionnaire comprises five questions related to learning

pronunciation and its fundamental part: stress, sentences stress and intonation. The questionnaire was filled anonymously. It might be found in Appendix 1.

### ***6.2.2. Recordings of Declarative Questions by Oranee Learners: Pre-test Recordings***

The first corpus of the research which seeks to answer the following questions, is collected through recordings.

1. What are the prosodic features (namely F0 movements of the interrogative contour in declarative questions) of Oranee English intonation in read speech?
2. What are the differences and similarities of Standard English intonation and Oranee English intonation in terms of terminal pitch movements of declarative questions? In other words, what does characterise this non-native intonation of English in this context?
3. Are there any factors influencing the intonational production of Oranee learners? (Mother tongue: Oranee dialect, or Second language: French)

It is constituted of six declarative questions. The utterances respect the structure of a declarative statement, yet they end with a question mark, so that, the participants will be aware that they are not declarative sentences, but declarative questions, where they should use the adequate intonation contours. The sentences of the corpus were divided into two categories. The first category contains sentences ending with words that contain only one syllable. Whereas the second category regroups sentences that have their final words ending with two syllables. The aim of this classification will

permit to discover whether the informant's terminal stress and pitch contour is always put on the first syllable of the final word or not.

Corpus of Declarative Questions	
Category one: One syllable	Category Two: Two syllables
النوراهي تصب؟ New rah- i t-sob? RAIN IS.PROG.3SG-F-F- RAINING /new rahi <b>tsob</b> / It is raining?	هدرت معاه ديجا؟ Hdart m3ah déjà? SPEAK.1PS HIM.3SG.M ADV /hdart mʕah <b>de.ʒa</b> ?/ You've already talked to him?
التلاميذ حفدو الدرس؟ Talam-id hafd-ou darss ? NPUPIL-PL LEARN-3PL LESSON /talami:d hafdu <b>dars</b> / The pupils learned the lesson?	سميرة قالت بلي ليديا راهي؟ Samira gale-t lydia rah-i jay-a ? SAMIRA SAY-3.SG.F LYDIA IS.PRG-F COME-3SG-F /Samira galet lidia rahi <b>ʒa.ja</b> / Samia said Lydia coming ?
سميرة جات ؟ Samira jat ? SAMIRA COME.3SG.PS /samira <b>ʒet</b> / Samira comes?	ليديا بصح دارت هاكا؟ Lydia bessah dare-t haka? LYDIA REALLY DO-3SG-F DEM /lydia besaħ deret <b>ha.ka</b> / Lydia really did that?

**Table 3:** Declarative questions categories

These particular utterances were chosen since they represent the type of declarative questions which the research needs to investigate on. In fact, they constitute the structure of declarative questions. That is to say, they have the form of a declarative

utterance in ORD, which is Subject verb, Object (SVO), yet they end with a question mark to indicate that they are questions when reading them. In addition, their final words are whether formed with one syllable or two syllables, so that we can analyze the position of the stressed syllable in ORD.

#### ***6.2.2.1. Procedure and data collection of the First Corpus: Pre-test Recordings***

The first corpus of the study was collected through audio recordings, using Audacity software as a recorder installed in a computer. The informants had a sheet of paper apart where the utterances were written. Thus, they read the declarative questions from the sheet of paper, while they were being recorded through the computer.

During the recording process, the order in which the utterances were presented was at random. There was no particular necessity to classify them. Furthermore, the recording procedure was conducted only once; there was no need to record the informants more than one time.

The recordings were realised into three phases, the six declarative questions, in Oranee dialect, English and French previously mentioned were given to eight native Oranee speakers, who are also students of English.

The first phase of the recordings took place on March, 6<sup>th</sup>. During those recordings, the students were given only the Arabic sentences to read. They were given two minutes to read them silently and then, they were recorded. Whereas, the second phase of the recording took place on March, 12<sup>th</sup>. The two phases of recordings were taken separately in order to avoid the influence of the Arabic production on the English one. Thus, during the second recordings, they were given the English declarative questions to read. Finally, on March, 19<sup>th</sup> the French version of the sentences was

recorded by the same informants. In total, the corpus contains 1440 sentences to analyse acoustically. The third phase of recordings was carried out to examine if there are any factors influencing the intonational production of Oranee learners; mother tongue “Oranee dialect”, or the informants’ second language “French”. This phase consists of recording the French version of declarative questions by the same students, following the same data procedure.

To analyse participants’ intonation, Winpitch program was used as a visual technology support. The procedure of the analysis follows the following steps:

First, before the alignment process, the text of the recordings had to be entered in Winpitch. The program offers two methods or modes to insert the text into Winpitch. In the first mode, the text is available on the computer, and the operator has just to load it on the program. The second alternative is used when the text does not exist on the computer. In this case, Winpitch allows to create a text file by selecting a block of speech and entering the corresponding text. We have chosen to work with the first mode.

The second step was to align words with their respective sounds. Winpitch provides a computer assisted alignment, based on a principle which says: “visual and gesture correlation between text and the sound could be made if the speech sound was slowed down by at least a factor of 30%, depending on the size of the units selected.” (Martin 2014:3)

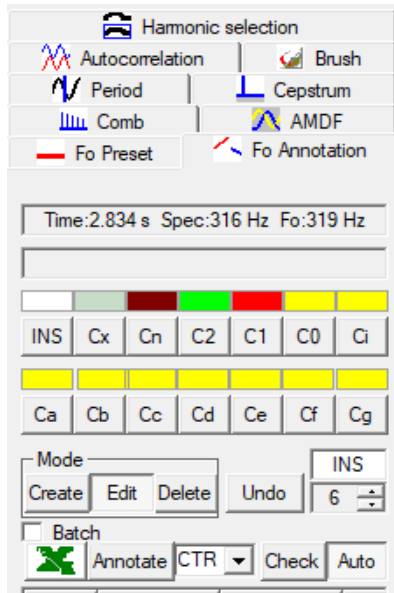
In other words, to align a text with its corresponding sounds, the recording should be played back at a slower speech, dynamically adjustable with the text displayed on a window. When the operator identifies a sound unit (a syllable, a word, a syntagm or a sentence), he/she should clicks on the corresponding unit in the text, using the computer mouse. Consequently, the program builds an alignment database constituted of the time position of the selected part of the text.

Next, the stressed syllables were determined in addition to their melodic contours. Those contours are represented with lines bearing different colours in the analysis window.

1. C0: final contour (Yellow)
2. C1: Rising (Red)
3. C2: falling (Green)
4. Cn: neutral/ flat contour (Brown)

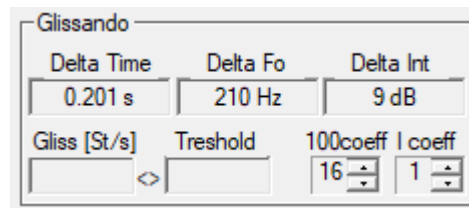
In order to annotate the stressed syllable using Winpitch, the following steps were carried out:

1. Load the recording and the text file in Winpitch. Using the option: Alignment.
2. In order to obtain a clear intonation pitch contour, the frequency of the recording should be decreased until 400Hertz.
3. The next step is to determine the stressed syllable and the melodic contour which it has. In order to do so, the SETUP (F0 tracking) option is used, where F0 annotation is available.



*Figure 15* : Winpitch Melodic Contours

4. Finally, verifying the threshold of the glissando in “Highlight” option.



*Figure 16*: Winpitch Glissando

### **6.2.3. Recording for Testing the Efficiency of the Audio-Visual Explanations versus the Distracted Imitation Method: Post-test Recordings**

The second part of the research concentrates on testing the efficiency of two teaching intonation methods: a distracted imitation task versus the visualization of a video with an instructor explaining the articulatory features declarative questions. Thus, the study raises the following question:



1. Are videos and awareness raising with the help of hand gestures as efficient as imitation regarding the acquisition of English declarative questions for Oranee learners?

Before recording the informants, two multimedia devices or videos were recorded by a native English speaker. In fact, during the first video, a native speaker read the utterances which are destined to be read by the informants in order to represent a model for the distracted imitation post-test recording.

The second video was also recorded by a native English teacher who explained the concept of declarative questions, in addition to the context where it is used. The teacher also illustrated the pitch behaviour using gesture and tapping movements with her hands and fingers in order to show the F0 movements of the interrogative focus in declarative questions. This multimedia learning instrument will be used as a video which tackles learners' declarative question production.

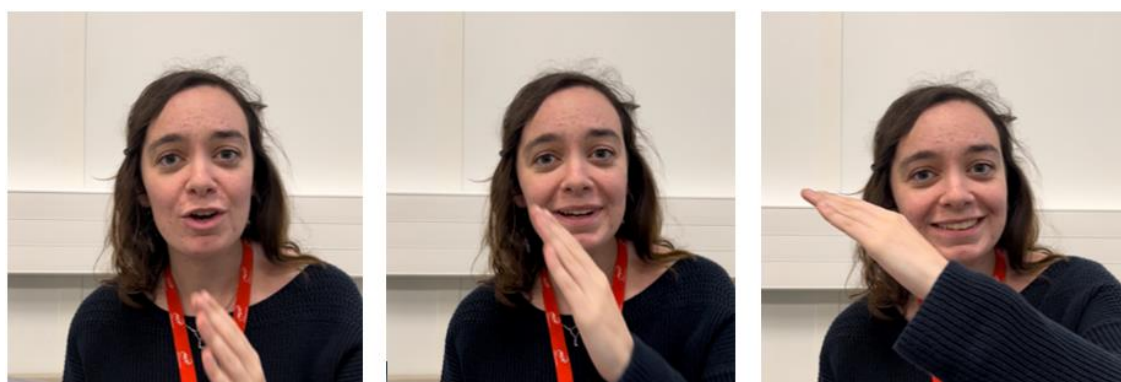
Both videos were recorded using a 1080p HD video recording at 25 fps, 30 fps, or 60 fps which contains Voice Isolation and Wide Spectrum microphone modes to have a clear performance without any interferences.

#### ***6.2.3.1. Procedure and data collection of the Second Corpus (Pre-test Recordings) Post-Test Recordings***

The second corpus of the study was collected through audio recordings at a sampling frequency of 44000Hz, in a quiet room using a headset microphone, using the same Audacity software as in the first study. The results of the first study established a baseline on the performance of the informants as far as the intonation of their declarative questions. Therefore, these recordings represent the second phase of the study to test the efficiency of the aforementioned learning methods.

Forty informants were divided into two groups. The first group read the utterances *with distracted imitation*. In other words, they first heard a model native speaker and then were asked to read a basic statement in their L1 (Oranee dialect) before repeating the English utterance. The script was always shown to the participants on a sheet of paper apart.

The second group, on the other hand, had to watch a video which raises awareness on English intonation of declarative questions. It explains the context where it is used and how physically and phonologically it is produced. In fact, the English teacher explained the pitch behaviour using gesture and taping movements with her hands and fingers in order to show the F0 movements of the interrogative focus in declarative questions. The following figure is a picture extracted from the video shown to the informants.



**Figure 17:** Video Screenshot Showing Explicitly the Rising tone when Producing the Utterance <Lydia is coming?> by a Native Speaker

After visualizing the explanatory video, they read and produced the same English utterances of declarative questions, yet without having heard a native English teacher or a speaking model. The output of the informants was analysed using the same technique used to analyse the first corpus. In fact, Winpitch program was used as a visual technology support. The procedure of the analysis follows the following steps: The

alignment of words with their respective sounds. Winpitch provides a computer assisted alignment. Next, the stressed syllables were determined in addition to their melodic contours. Those contours are represented with lines bearing different colours in the analysis window (see section 6.2.2.1.)

#### **6.1.4. Conclusion**

To conclude, the actual chapter illustrates the procedure implemented in collecting data and the instruments involved in analyzing data. In fact, the study follows a qualitative research procedure which aims at following a peculiar process rather than simply number outcomes or products. It requires a descriptive and inductive methods to analyse words, utterances, pictures and so on.

The present chapter deals with the research methodology of the thesis. It details the procedure of data collection and the instruments used to explore and analyse the obtained data. It also presents the informants who participated to the fulfilment of the study. The next chapter tries to answer the research question mentioned in this research.

## **Chapter VII**

### **FINDINGS AND DISCUSSIONS**

## **Introduction**

As previously mentioned in the other chapter, the purpose of this research work is to describe the Oranee dialect intonation. More precisely, it provides a characterisation of the used melodic contour to express declarative questions in read and spontaneous speech. The aim and the results of this first step will allow conducting the comparison between the production of English intonation by British English users and non-native Oranee learners of English. Finally, the second part of the research concentrates on testing the efficiency of two teaching intonation methods: a distracted imitation task versus the visualization of a video with an instructor explaining the articulatory features declarative questions. Thus, this chapter tries to answer the following questions:

1. Are Oranee Students aware that pronunciation play an crucial role in communication performance? What is their motivation.
2. What are the prosodic features (namely F0 movements of the interrogative contour in declarative questions) of Oranee English intonation in read speech?
3. What are the differences and similarities of Standard English intonation and Oranee English intonation in terms of terminal pitch movements of declarative questions? In other words, what does characterise this non-native intonation of English in this context?
4. Are there any factors influencing the intonational production of Oranee learners? (Mother tongue: Oranee dialect, or Second language: French)
5. Are videos and awareness raising with the help of hand gestures as efficient as imitation regarding the acquisition of English declarative questions for Oranee learners?

Two sub corpora were collected to fulfil the research objective. The first one was used to answer the first, the second, the third and the fourth research questions; whereas, the second sup corpus considers the fourth question. In order to collect all data, eighty Oranee English learners were implemented in the research.

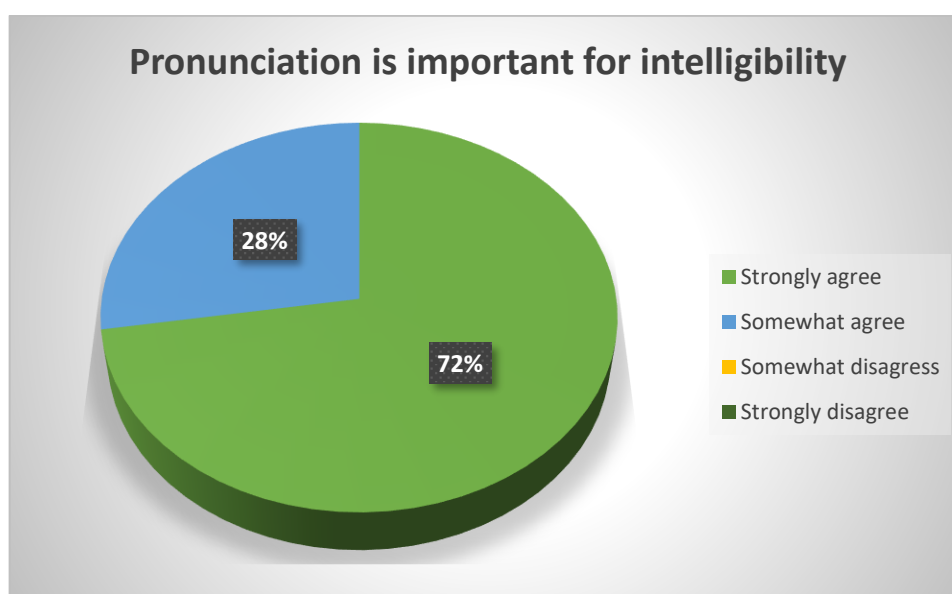
Before conducting the study, it was important to evaluate the informants' knowledge about the suprasegmental feature. The purpose of the questionnaire is to see whether students are interested and motivated in learning pronunciation and if they are aware that it has an important role in the production and perception of speech and, that it is a major factor that leads to the intelligibility of speech. It also helps looking for the root of the pronunciation problems and gives us an explanation about the students' poor performance.

In order to achieve the research objectives, a descriptive research procedure was implemented to afford a characterisation of the F0 movements of the interrogative contour in declarative questions of Oranee English intonation. The last question related to the efficiency of the aforementioned learning methods in learning those intonational aspect of declarative question was tackled using micro qualitative experimental research procedure. The collected data will be analysed using Winpitch (Philippe Martin, 2016) as a visual technology to annotate the stressed syllables and determine their melodic contours.

## 7.1. Learners' Attitudes toward Pronunciation

### 7.1.1. Questionnaire Results

The starting point of the research is the use of the field work (questionnaire) to collect the data needed to confirm or infirm the first research question related to learners' motivation and awareness about the important of prosody in a proper English pronunciation. To begin with, eighty students filled in the questionnaire anonymously. The results are presented in the chart below.

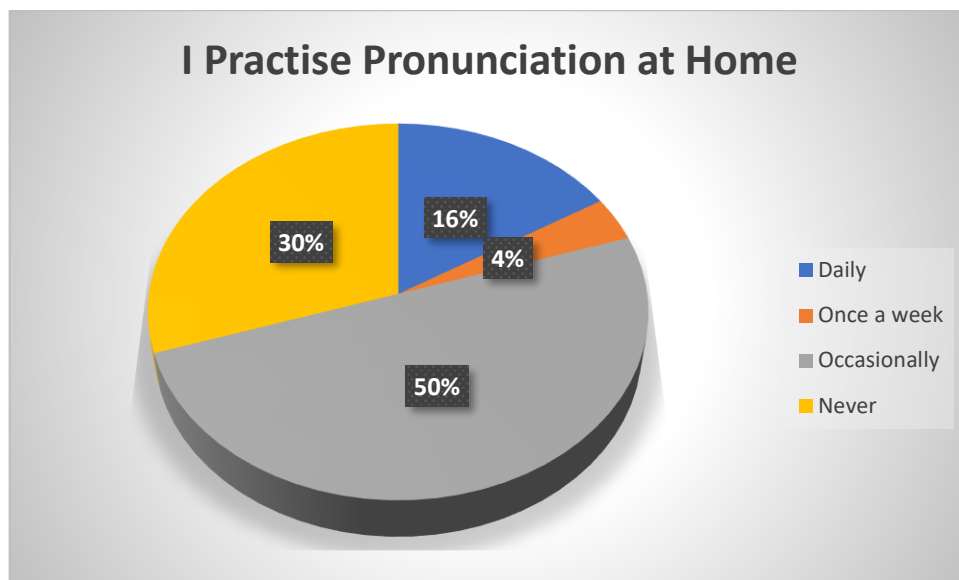


**Figure 18:** *Pronunciation is Important for Intelligibility*

To start with, it is important to mention that finding students who were willing to participate to the research was not complicated. Their attitude toward the research was positive, so they made efforts when filling the questionnaire and took it seriously. The questions and the difficult terms were explained; shortly afterward, the students answered the question. The results show that most of the students (72%) strongly agree with the fact that pronunciation is important in the understanding of speech. The rest of the informants (28%), consider it somewhat important for good communication. To sum up, the results sustain that all the participants agree on the fact that pronunciation is a key

element in pronunciation. Therefore, we can examine student's extent of practice during lectures. Accordingly, most of the selected informants were not satisfied with the quality and extent of practice during the whole first semester. Some of them argued that phonetic lectures are afforded in a traditional manner, where the teacher monopolizes the course and does not give the opportunity to the students to speak and consequently practise their English. Only six informants find that the extent of practice was somewhat satisfactory. They argued that they can imitate teachers' pronunciation during the different lectures. It can be concluded that learners are interested in in learning pronunciation. Imitation seems to be a natural way of learning a foreign language, yet quality materials are note afforded during lecture.

Besides the practice of pronunciation in class was tackled in the questionnaire in order to know whether students practice by their own at home. The results are highlighted in the following graph.



*Figure 19: I Practise Pronunciation at Home*

As seen in the chart above, thirteen out of eighty students claim to practise pronunciation daily, and only three students practise it once a week, forty occasionally and twenty-four students do not practice at all pronunciation at home. Interestingly, although the majority of the informants find pronunciation very important for

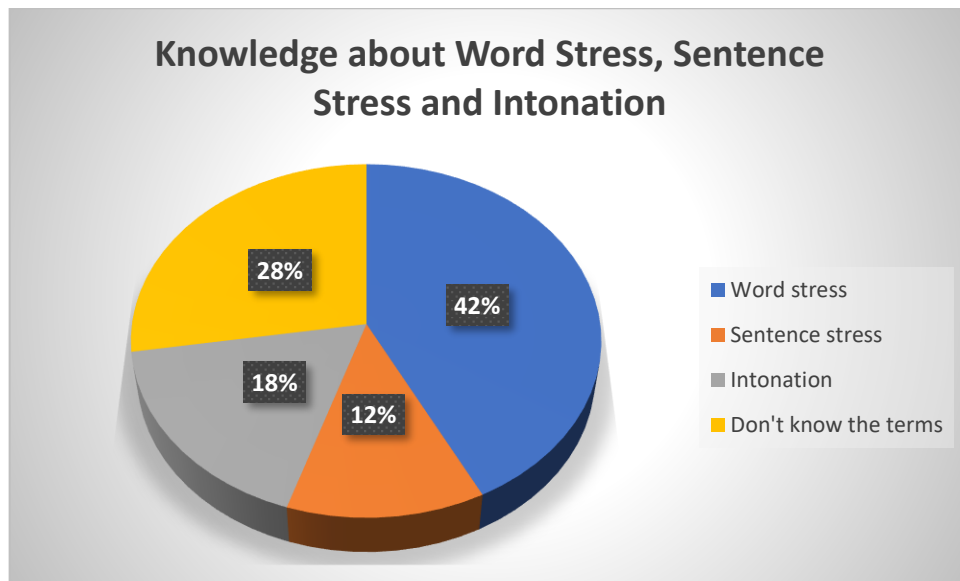


intelligibility, they do not practice it very often at home. The argument of the forty students that practise it occasionally is that they are not interested in, nor do they have time to practise their speaking skill.

Some contradictory findings were observed concerning the practice of pronunciation and the fact of considering it as an important element in communication. In fact, twenty four informants, who represent 30% of the participants never practise pronunciation even though they strongly agree that pronunciation is crucial for an intelligible performance. This opposition proves that students are not motivated in learning pronunciation. One reason behind these results is that, according to the informants, materials and quality teaching is missing in the classroom. As a matter of fact, they argued that they lack a model teacher with whom they can practise pronunciation. In addition, they judge that the educational program pays attention to the traditional aspect of language which is grammar and vocabulary. Yet, phonetics and pronunciation are neglected and taught using the same teaching process as grammar. Informants sustained that their motivation is driven by the teaching conditions and the lack of materials in addition to the genuine pedagogical process.

Considering the next question related to the notions that informants have about word stress, sentence stress and intonation, the results indicate that most of the informants (42%) know and have some notions about word stress since they studied it at school or at university. Only 12 % of informants knew about the concept of sentence stress and 18% about intonation. We notice that twenty-eight informants have absolutely no idea about those concepts (See graph 20). It can be concluded from the results that students are not aware about the existence of sentence stress and intonation in speaking. They are at the third grade of a BA in English and do not know about those suprasegmental elements of language. This is another argument which sustains the fact that the teaching program in

phonetics and phonology is not adequate at this level of studies. These findings also explain students' poor performance of English pronunciation, since they are not aware about the existence of these melodic contours of utterances which form accent as well as meaning.



*Figure 20: Knowledge about Word and Sentence Stress*

To sum up, the results of the charts above can confirm the hypothesis that students are not interested in their pronunciation and do not have the right and quality learning methods to improve it. The results of the questionnaire further show the confusion in students' opinions. On one hand, they agree that pronunciation is very important for speech intelligibility. And on the other one, they are not interested in and will not practice it even if they want to, owing to the lack of training in the classroom and at home. More importantly, the majority of the students don't use the suprasegmental feature in their speech, which in turn has a considerable influence in their pronunciation. The findings of the questionnaire and these informants will help the research conduct the second part of the research taking into account their motivation and their expectations concerning quality methods of learning.

## 7.2. Recordings Results

### 7.2.1. Declarative Questions Produced in Arabic by Oranee Speakers: A Basic Characterization

After the first recordings were collected and analysed acoustically, the findings are discussed in this part of the research. The following tables are examples to illustrate the research analysis. The rest of informants' realisations were analysed following the same process. Thus, the tables below highlight the f0 movements of the stressed syllables of the final words with their corresponding terminal melodic contours *C0* (whether the stressed syllable has a falling or a rising tone) of the first seven informants when producing the ORD declarative questions. In addition, the values of the melodic slopes were calculated in order to explain the resulted rising or falling contour of the stressed syllable.

The first set of tables refers to the first category of utterances (those with words ending with one syllable). While the second set of tables represents the second category of declarative questions (those endings with words containing two syllables).

Informants	F0 value “Tsob” initial	F0 value “Tsob” final	contour Ph.Martin	Slope (pente)
Informant 1	180	220	C0 rising	40
Informant 2	160	180	C0 rising	20
Informant 3	280	310	C0 rising	30
Informant 4	175	220	C0 rising	45
Informant 5	220	325	C0 rising	105
Informant 6	340	360	C0 rising	20
Informant 7	275	180	C0 falling	95

**Table 4:** Utterance 1: New rahi **tsob**?

Informants	F0 value “darss” initial	F0 value “daress” final	Contour Ph.Martin	Slope (pente)
Informant 1	160	240	C0 rising	40
Informant 2	140	200	C0 rising	60
Informant 3	260	440	C0 rising	180
Informant 4	175	200	C0 rising	25
Informant 5	245	320	C0 rising	75
Informant 6	280	310	C0 rising	30
Informant 7	260	240	C0 falling	20

**Table 5:** Utterance 2: Talamid hafdou darss?

Informants	F0 value “jet”initial	F0 value “jet” final	Contour Ph.Martin	Slope (pente)
Informant1	140	200	C0 rising	60
Informant2	150	210	C0 rising	60
Informant3	240	290	C0 rising	50
Informant4	140	210	C0 rising	70
Informant5	225	310	C0 rising	85
Informant6	345	460	C0 rising	115
Informant7	240	300	C0 rising	60

**Table 6:** Utterance 3: Samira jat?

The results of the first category support the general tendency of a rising terminal contour of the last word. The average of the rising slopes is 61 Hertz. Consider the following example where their final word contains only one syllable:

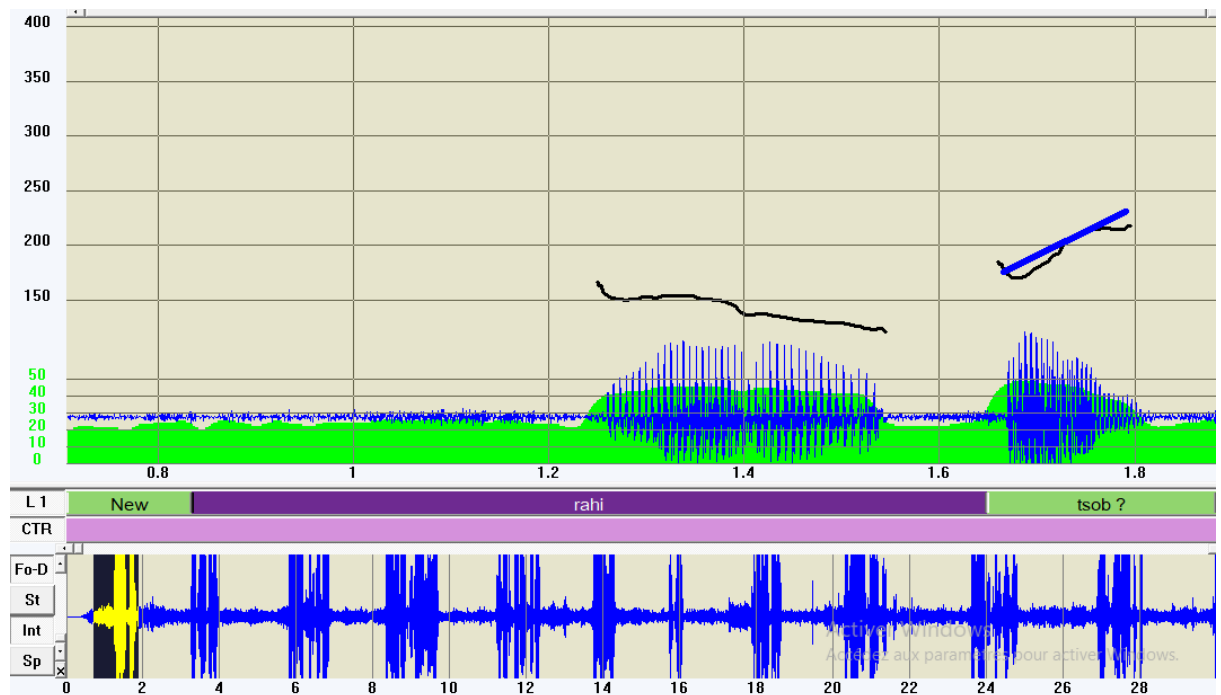
1. First sentence: Produced by the first informant

New rahi tsob ?

RAIN IS.PROG.3SG-F-F- RAINING

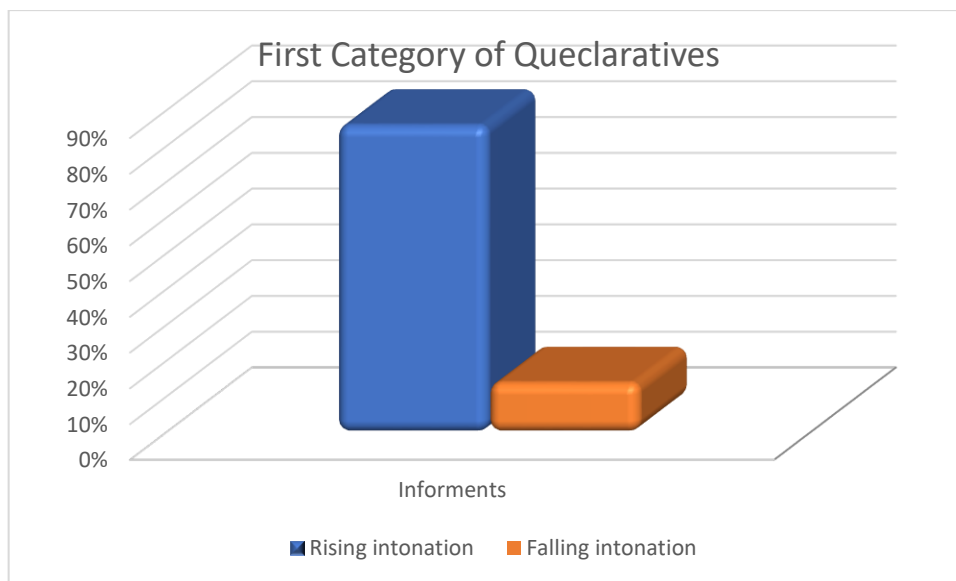
/new rahi tsob/

It is raining?



*Figure 21:* Utterance 1/ Informant1

It is clear from the above figure that the informant produced a declarative question, stressing the final syllable, and therefore, producing a rising C0 contour with a slope rate of 40 Hertz, which determines the end of the sentence. In addition, the majority of the students produced the declarative questions of the first category with a rising intonation contour. In fact, 86% of the informants have a rising terminal pitch when producing the first category which represents final words with only one syllable. The remaining students failed to produce a rising tone in utterance 1 and 2. In fact, the informant used a falling terminal tone with a slope rate of 95Hertz for the terminal falling contour of the first utterance, and 20Hertz for the second one. Consequently, she/he failed to utter a question. Yet, her/his production was flat, resulting in a hesitation in reading the sentence as a question or a statement. This might be due to the type of data recordings which is read speech.



8.

**Figure 23:** The Intonation of the First Category of Declarative Questions

However, as mentioned previously, the last word of these declarative questions was constituted of only one syllable: <tsob> /tsob/. Thus, we cannot conclude or determine the position of the stress syllable, since there exist words with more than one syllable.

Let's have a look at the second category of declarative questions, with two syllables.

Informants	F0 value « déjà » initial	F0 value « déjà » final	Contour Ph.Martin	pente
Informant1	140	200	C0 rising	60
Informant2	140	210	C0 rising	70
Informant3	240	360	C0 rising	120
Informant4	180	200	C0 rising	20
Informant5	230	310	C0 rising	80
Informant6	290	330	C0 rising	40
Informant7	400	470	C0 rising	70

**Table 7:** Utterance 4: Hdart m3ah déjà?

Informants	F0 value « déjà » initial	F0 value « déjà » final	Contour Ph.Martin	Slope (Pente)
Informant1	140	200	C0 rising	60
Informant2	140	210	C0 rising	70
Informant3	240	360	C0 rising	120
Informant4	180	200	C0 rising	20
Informant5	230	310	C0 rising	80
Informant6	290	330	C0 rising	40
Informant7	400	470	C0 rising	70

**Table 8:** Utterance 5: Samira galet lydia rahi jaya ?

Informants	F0 value “haka “initial	F0 value “haka “final	contour Ph.Martin	Slope (pente)
Informant1	175	230	C0 rising	55
Informant2	210	210	C0 neutre	0
Informant3	340	425	C0 rising	85
Informant4	200	230	C0 rising	30
Informant5	250	350	C0 rising	100
Informant6	400	410	C0 rising	10
Informant7	400	430	C0 rising	30

**Table 9:** Utterance 6: Lydia bessah daret haka?

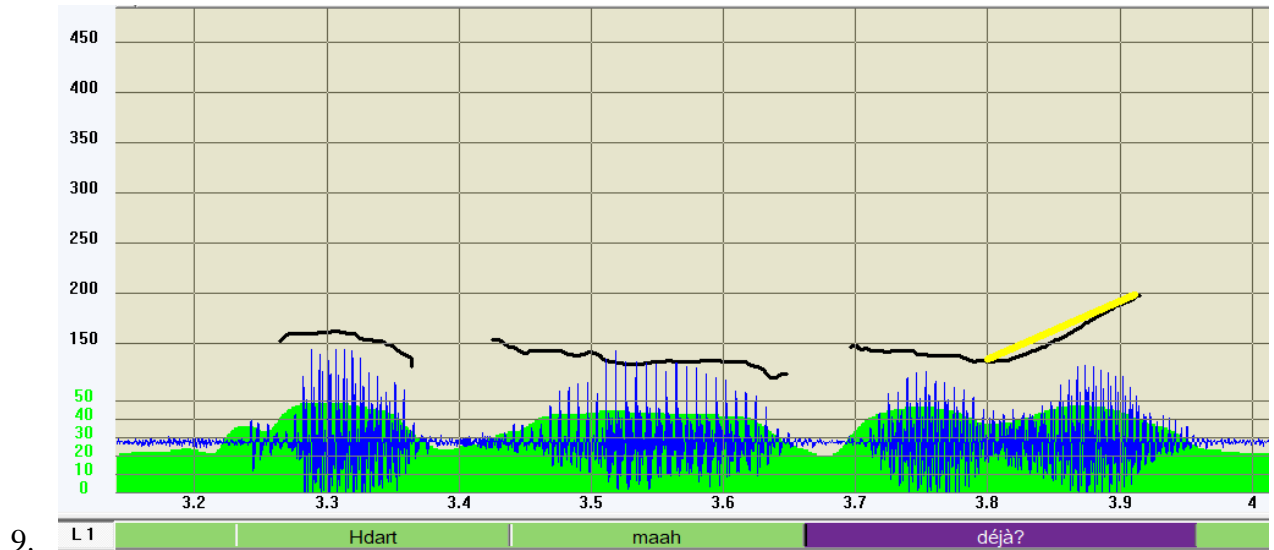
It is important to note from the observed acoustic analysis and the above tables of the second category (final words with two syllables) that the general tendency of the Oranee speakers' production when uttering a declarative question is to produce a terminal melodic rise in their final syllable, with a rising slope average of 67 Hertz. To be able to understand, consider the following example: Utterance 4 produced by the first informant.

هدرت معاه ديجا؟

Hdart m3ah déjà ?

SPEAK.1PS HIM.3SG.M ADV

/hdart mʕah **de.za**?

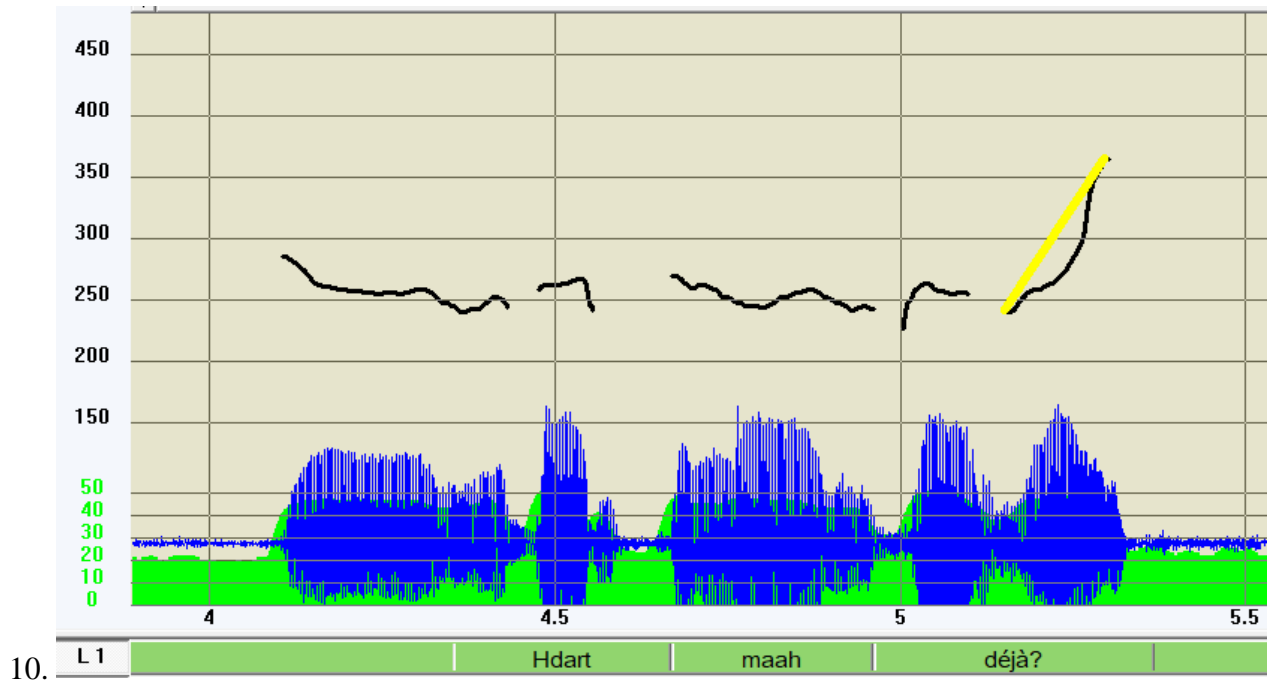


*Figure 24:* Utterance 4/ Student 1

The last word of the utterance is a French borrowed word used in the Oranee dialect. It is composed of two syllables dé/jà. As shown in the above graph, the informant has stressed the final syllable of the declarative question, and not the first syllable of the final word. In addition, the melodic contour has a rising tone. It can be concluded according to the resulted data shown in the tables that declarative questions produced by Oranee speakers are characterised by a jump in pitch from the previous unstressed syllable, forming a clear and distinct rising tone in the final syllable of the last word.

The following figure represents the production of informant 6, a female native speaker. It is characterised with a higher intensity and F0 movement. In fact, when compared with the first and second student, her F0 movement of the last syllable in the last word reaches 350 Hertz while the others were between 230-240 Hertz.





*Figure 25: Utterance 2 / Informant 6*

However, her intonation of the declarative sentence is characterised as the other productions with a rising tone in the final syllable of the last word. It is also important to mention, that in their productions the students focus on only one syllable to produce the interrogative tone. The preceding syllables are flat and with no perception of variation.

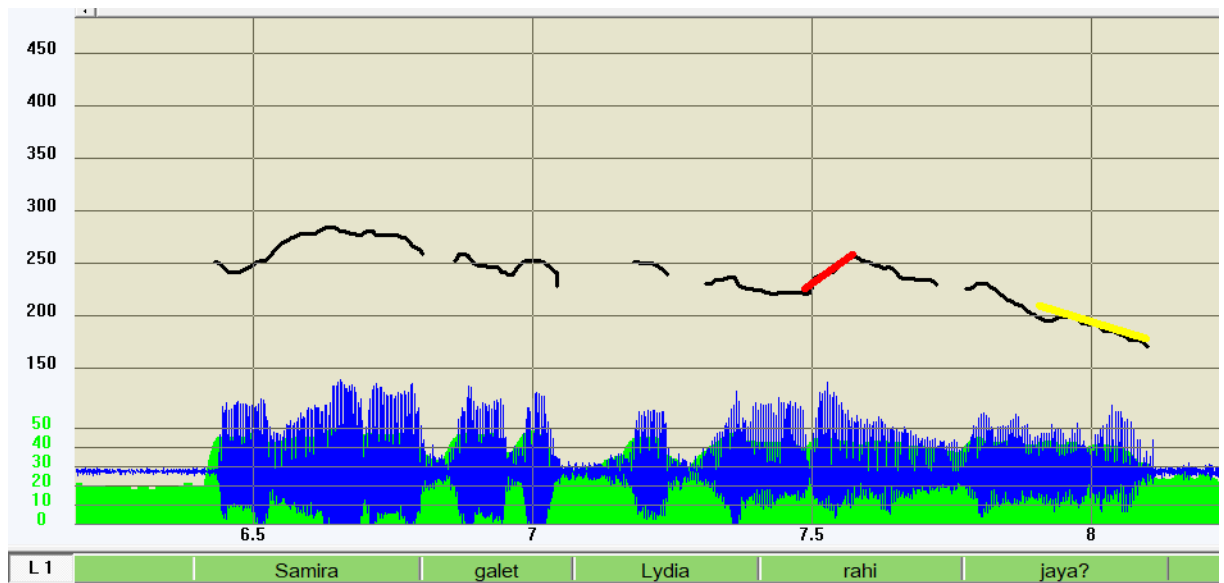
Another significant aspect of the informants' productions was observed in the recording of informant 7 and informant 5 . Contrary to the other students, their intonation contour of the last syllable in the final word was produced with a falling tone in utterance 5 and 6. See figure 26 :

راهي؟ ليديا بلي قالت سميرة

Samira galet lydia rahi jaya ?

SAMIRA SAY-3.SG.F LYDIA IS.PRG-F COME-3SG-F

/samira galet lidia rahi zaia/



*Figure 26:* Utterance 5 / Informant 5

It can be noticed from the analysed sentence that intonational curve is progressively declining or falling, until the last syllable of the last word. This result is a counterexample of the preceding findings. However, one explanation is that the informant failed in producing a declarative question using the right intonation and melodic contour. As a matter of fact, her realisation does not sound natural. It sounds as a flat statement or a declarative sentence. The falling contour in the last syllable gives the impression that the informant is not sure about what she is saying.

It can also be observed that the informant stressed two syllables in the “stressed group”. In fact, she stressed <raHI> using a rising contour and <jaYA> with a falling contour. This could explain why she could not use another rising contour in the last syllable of the last word <jaYA>. This is why her realisation sounds awkward. Concerning informant 7, her falling contour cannot be representative of the intonation of declarative questions, since she is the only one who produces this contour. In addition, as informant 5, the falling contour does not produce an interrogative contour.

Therefore, it can be concluded that in order to produce a declarative statement functioning as a question, the speaker should use only one rising contour in the last

syllable of the final word and not a falling one. In addition, the other syllables which precede the stressed syllable should have whether a flat, neutral or a falling contour.

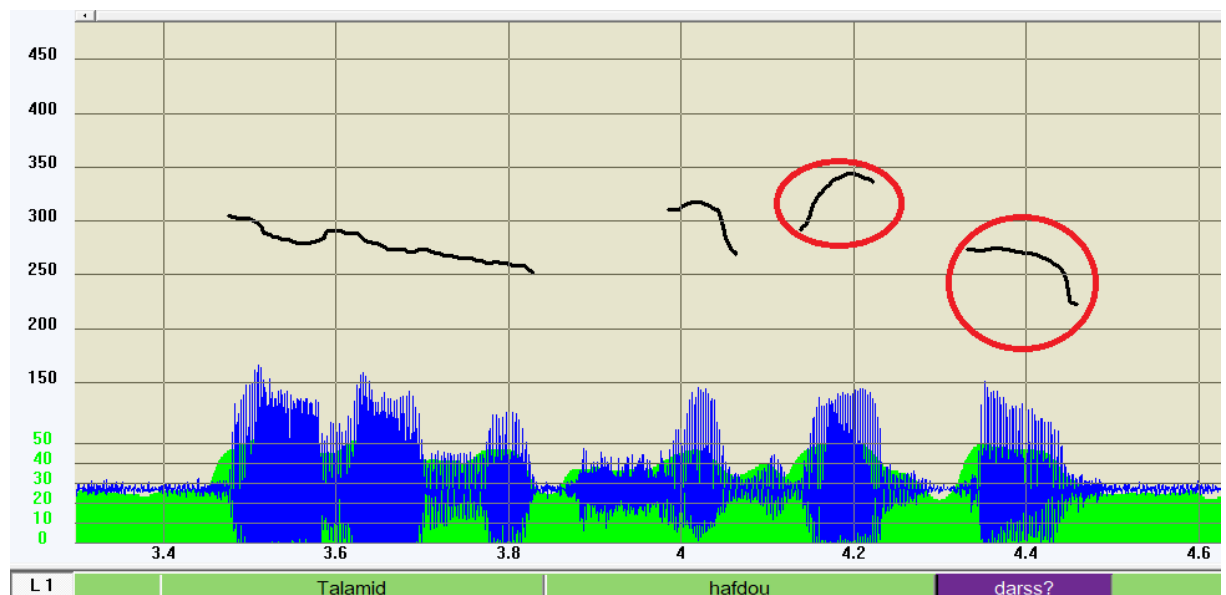
Finally, another interesting phenomenon has been observed in the production of informant 7 . Look at figure 27

Utterance 2

Talamid hafdou darss ?

/talami:d ɥafdu dars/

Les élèves ont appris la leçon?



*Figure 27* : Utterance 2 / Informant 7

According to the acoustic analysis, the informant produced the last syllable of the last word <dars> with a curve moving from a neutral tone to a falling contour, yet her realisation is not false and does sound as an interrogative statement. However, if we listen carefully, we notice that her realisation embodies or reflects incertitude. She dressed her realisation with a natural and theatral impression. In order to achieve this realisation, she had to raise the syllable which precedes the last syllable of the final word. And her pitch contour was not under 240 Hertz, while the previous realisation of student5, which it falls under 200hertz, or F0 was between 150 and 200 Hertz.

In this section, we presented the results of the analysis of declarative questions produced by native speakers of the Oranee dialect. The findings revealed that the majority of the informants produced a rising melodic contour in the last stressed syllable of the final word in both categories (i.e. final words with one syllable or two syllables). Whereas, the other preceding syllables are realized whether with a flat or a falling tone. In fact, this shows a dependency relation between tone units. The preceding syllable cannot have a rising tone, since the following one already bears a rising terminal contour. Thus, it is not possible to have two similar adjacent contours. The study also revealed that a rising tone is not the only contour which characterizes declarative questions intonation. In fact, it can be produced with a curve, going from a flat to a falling tone. Also, the results show that statements produced with a falling intonation contour in the last syllable of the last word are considered as declarative sentence.

As mentioned previously, the research has as a main objective to describe and characterize the Oranee intonation in declarative questions. Although the research was revealing, yet it is important to take into account the limitations that were present during the research. First, the number of participants was limited; however, generalized results were not the objective of the study, since it follows a qualitative research procedure. In addition, it would be more worthwhile to work with spontaneous speech, because it provides concrete data which is not influenced by any other factors. Hence, the obtained results with read speech were objective and valid.

### ***7.2.2. English Declarative questions Produced by Oranee Speakers***

The second part of the experimental study concentrates on the description of the Oranee informants' English productions. It seeks to analyse the terminal melodic contours that EFL learners produce when uttering declarative questions in read speech. Consequently, the purpose of the present research is to establish the differences and

similarities of Standard English intonation and Oranee English intonation in terms of terminal pitch movements of declarative questions in read speech. In other words, it tries to characterise this non-native intonation of English in this context. In addition, we will examine if there are any factors influencing the intonational production of Oranee learners; mother tongue “Oranee dialect”, or the informants’ second language “French”. This is why the third phase of recordings was carried out. This phase consists of recording the French version of declarative questions by the same students, following the same data procedure. (See chapter VI). Data analyses of this part were carried out following the same procedure as the first part of the experimental study. Similarly, after the second recordings were collected and analysed acoustically, the findings are presented and discussed in this part of the research.

Correspondingly, the utterances are divided into two categories. The first one regroups declarative questions ending with words formed with only one syllable. Whereas, the second category contains declarative questions which have a two syllables final words. Consider the following table.

Corpus Declarative questions	
Category 1: 1 syllable	Category 2: 2 syllables
1/ You’ve already talked to him? /ju:v ɔ:l'rædi tɔ:kt tu: <b>him</b> ?/	4/ It is raining? /ɪt ɪz 'reɪn.ɪŋ/
2/ Lydia really did that? /'lɪdɪə 'rɪəli dɪd <b>ðæt</b> ?/	5/ Samia said Lydia is coming? /sɑ:mɪə sed 'lɪdɪə ɪz 'kʌ.mɪŋ ?/
3/ Samira comes? /sɑ:mɪrə <b>kʌmz</b> ?/	6/ The pupils learned the lesson? /ðə 'pju:plz lɜ:nt ðə 'lɛ.sn?/

**Table 10:** English Declarative Questions

The first observation we notice from the above table is that the English stressing system in declarative questions is different from the one of Oranee dialect. In fact, according to the preceding results, we discovered that stress is always put on the last syllable of the final word in the ORD. While in English, stress is put on the first syllable of the final word. For example, coming and lesson 'kʌ.mɪŋ and 'lɛ.sn. Therefore, the next section will allow us to see whether the stress system of the ORD dialect influences the informants' English production. If so, we will find that they stress the last syllable of the final words instead of the first one. Yet, before analysing this process, it is important first to consider their intonation of declarative questions with words containing only one syllable. The following tables represent the values of the f0 movements of the stressed syllables of the final words with their corresponding terminal melodic contours (whether the stressed syllable has a falling or a rising tone) of each informant when producing the ORD declarative questions. In addition, the values of the melodic slopes are calculated in order to explain the resulted rising or falling contour of the stressed syllable.

The first set of tables represents the first category of English utterances (those ending with words containing only one syllable). While the second set of tables represents the second category of English declarative questions (those endings with words containing two syllables). The red line in the table represent a falling terminal contour, while the yellow one refers to the value of the slope (pente) which is under 30Hertz.

Tables of the first category:

Informants	F0 value « him » initial	Valeur de f0 « him » final	contour Ph.Martin	Slope (pente)
Informant1	140	190	C0 rising	50
Informant2	160	230	C0 rising	70
Informant3	250	200	C0 falling	50
Informant4	220	260	C0 rising	40
Informant5	200	260	C0 rising	60
Informant6	250	250	C0 neutral	0
Informant7	240	200	C0 falling	40

*Table 11:* Utterance 1: You've already talked to him?

Informants	F0 value "that" initial	F0 value "that" final	contour Ph.Martin	Slope (pente)
Informant1	145	210	C0 rising	65
Informant2	190	210	C0 rising	20
Informant3	260	360	C0 rising	100
Informant4	140	230	C0 rising	90
Informant5	220	280	C0 rising	60
Informant6	240	260	C0 rising	20
Informant7	240	340	C0 rising	100

*Table 12:* Utterance 2: He really did that?

<b>Informants</b>	<b>F0 value “came”initial</b>	<b>F0 value “came” final</b>	<b>contour Ph.Martin</b>	<b>Slope (pente)</b>
Informant1	145	210	C0 rising	65
Informant2	125	240	C0 rising	115
Informant3	250	310	C0 rising	60
Informant4	160	250	C0 rising	90
Informant5	240	200	C0 falling	40
Informant6	280	310	C0 rising	30
Informant7	350	200	C0 falling	150

*Table 13:* Utterance 3: Samira came?

Tables of the second category:

<b>Informants</b>	<b>F0 value “raining”initial</b>	<b>F0 value “raining” final</b>	<b>contour Ph.Martin</b>	<b>Slope (pente)</b>
Informant1	140	225	C0 rising	85
Informant2	160	240	C0 rising	80
Informant3	250	280	C0 rising	30
Informant4	200	270	C0 rising	70
Informant5	230	300	C0 rising	70
Informant6	250	310	C0 rising	60
Informant7	300	200	C0 falling	100

*Table 14:* Utterance 4: It is raining?



Informants	F0 value “coming”initial	Valeur de f0 “coming” final	contour Ph.Martin	Slope (pente)
Informant1	145	160	C0 rising	15
Informant2	180	200	C0 rising	20
Informant3	260	350	C0 rising	90
Informant4	160	240	C0 rising	80
Informant5	220	270	C0 rising	50
Informant6	270	210	C0 falling	60
Informant7	320	360	C0 rising	40

*Table 15:* Utterance 5: Samia said Lydia is coming?

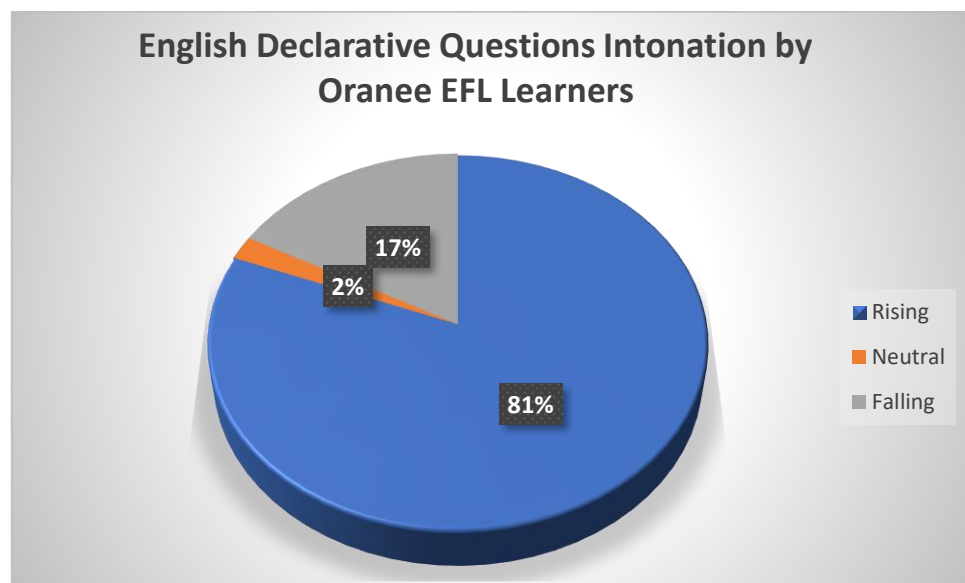
Informants	F0 value “jet”initial	F0 value “jet” final	contour Ph.Martin	Slope (pente)
Informant1	200	250	C0 rising	50
Informant2	200	240	C0 rising	40
Informant3	340	360	C0 rising	20
Informant4	230	240	C0 rising	10
Informant5	250	310	C0 rising	60
Informant6	260	270	C0 rising	10
Informant7	260	200	C0 falling	60

*Table 16:* Utterance 6: The pupils learned the lesson?

The results of the first category (final words ending with one syllable) support the general tendency of a rising terminal contour of the last word. In fact, 81% of the informants produced this intonation, and only 18% of them used a falling terminal contour in their last syllable. Look at the following graph:

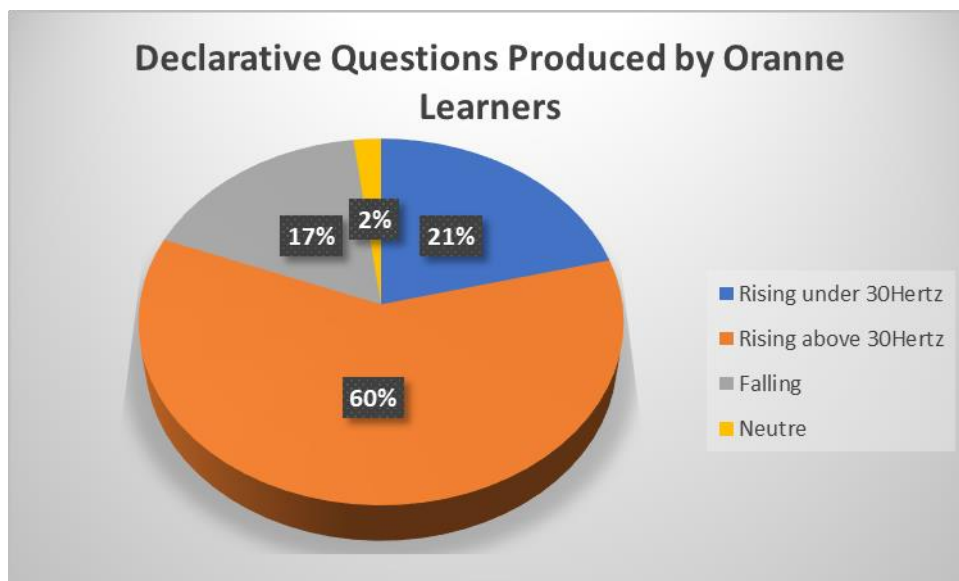
Pitch Contours	Percentage
Rising	81%
Neutral	2%
Falling	17%

**Table 17:** English Declarative questions Intonation by Oranee EFL Learners



**Figure 28:** English Declarative Questions Intonation by Oranee EFL Learners

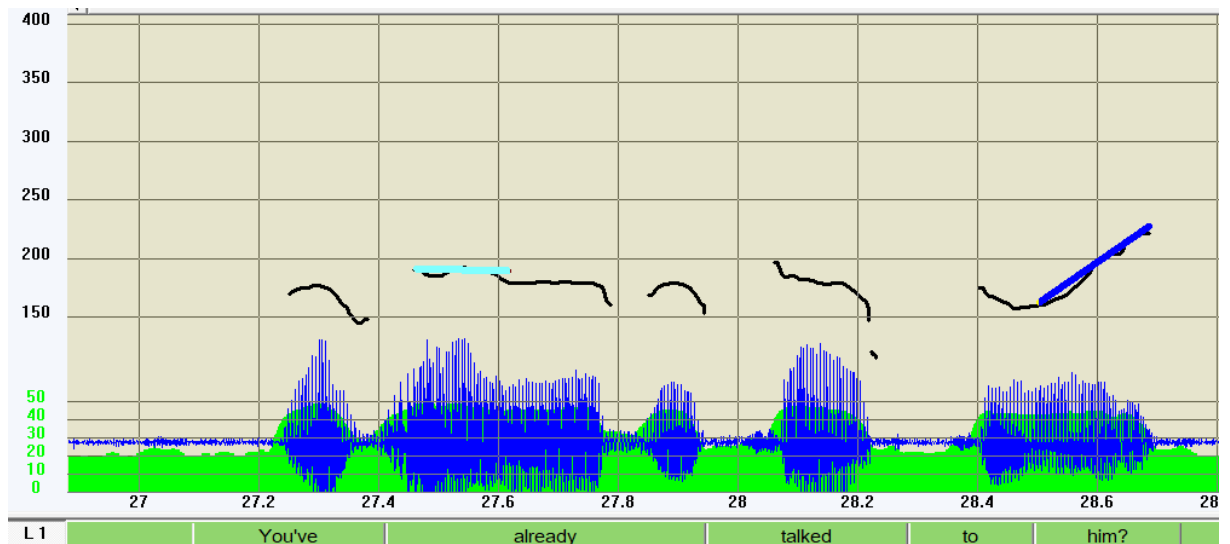
However, producing a rising terminal contour does not signify that the informant succeeded in uttering a declarative question. In fact, 26% of the production ended with a rising contour in their final syllable, yet the production of the statements did not sound as a question. One possible explanation is that the value of the slope of those realizations was under 30Hertz. Thus, it can be concluded that in order to produce a correct terminal rising contour, the value of the slope should be above 30Hertz. The 74 % remaining rising productions were correct since the slope of their rising tones was above 30Hertz. Consequently, the representative percentage of the rising terminal contour; taking the value of the slope into account, is not 81% but it decreases up to 60%.



**Figure 29:** English Declarative Questions Intonation by Oranee EFL Learners

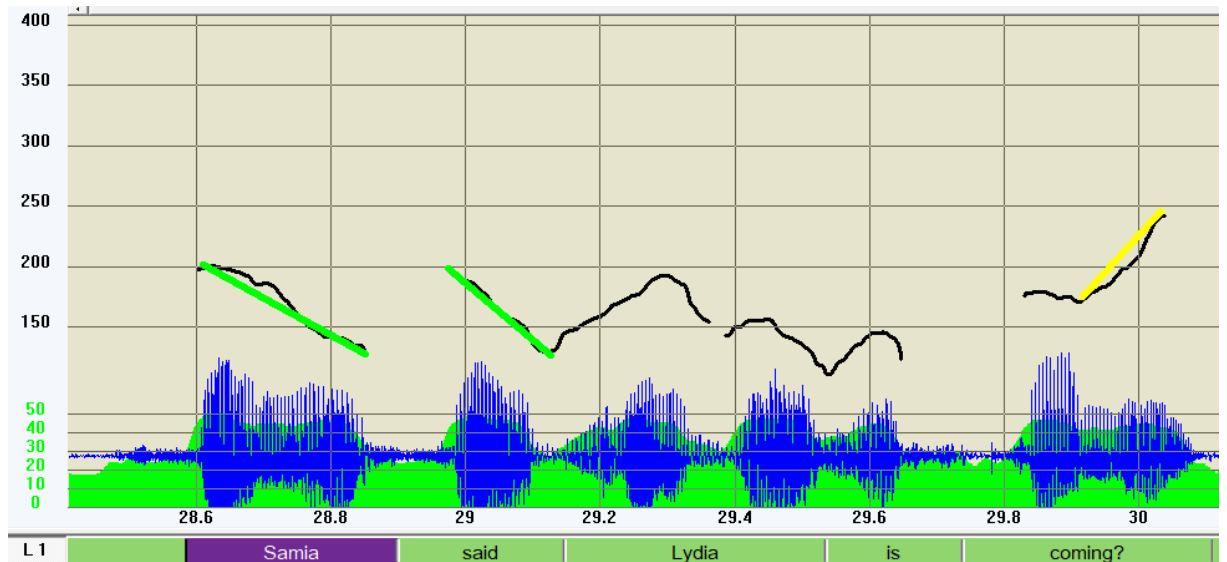
Concerning the falling terminal contour, contrary to what Geluykens (1988) said, it does not represent the intonation of declarative questions when produced by the Oranee EFL informants. Effectively, their realizations sound as declarative statements. Consequently, we can assume that other features related to the previous tone units of the declarative question are implemented when using a falling contour. Those factors are not observable in the students' productions. Further analyses need to be conducted to explain the option of a falling intonation to produce those type of questions.

Coming back to the value of the rising contour slope, the question one should ask is why those informants produced a slope of the terminal rising contour above 30Hertz. As mentioned previously, according to the acoustic analysis performed with the visual technology Winpitch, we have discovered that a rising terminal contour is not sufficient to produce a declarative question. This is clearly shown in informant's production of the first utterance: "You've already talked to him". Consider the following figure:



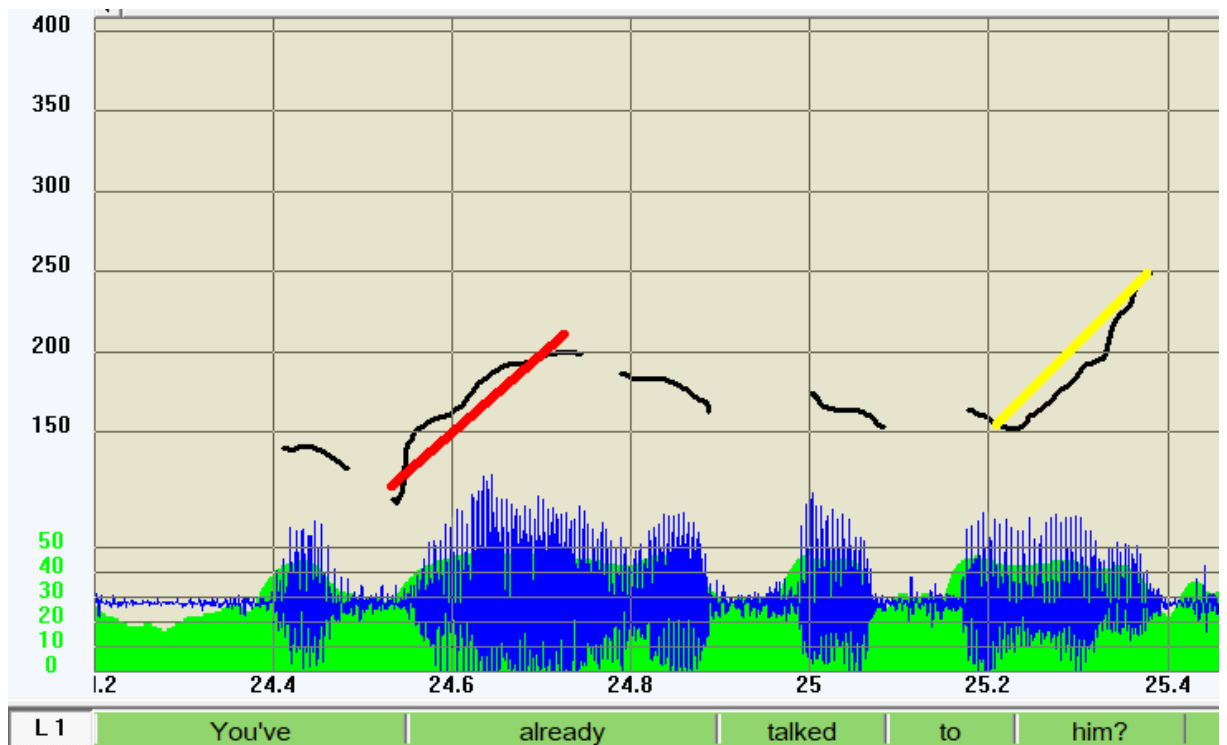
*Figure 30:* Informant 1/ Utterance 1.

The figure shows that the informant produced the whole utterance stressing only the last syllable of the final word, while the other syllables of the previous tone units are flat. Consequently, his production sounds fake and not natural. He tried to imitate the intonation of polar questions by placing a terminal rising contour on the last syllable only. However, this is not enough. In order to obtain a normal declarative question using intonation, he had to stress the word *already* (using a rising contour), in addition to the rising terminal contour. This proves the importance of the dependency relation between tone units. Actually, a flat (Cn) tone cannot be followed by another flat tone (Cn). Thus, this production is wrong \*Cn- Cn. Figure 13 shows the same mistake produced by the same informant producing utterance 5. This time he realised two falling melodic contours successively (\*C2-C2); therefore, his realization was not correct.



**Figure 31:** Informant1/ Utterance 5

A counter example of a correct production is shown in informant’s 4 realization of utterance 1. He stressed the word “already” and “him”.



**Figure 32:** Informant 4/Utterance 1

Yet, it is important to mention that intonation is the only problem the informants face during their production. They also have troubles with loudness. Some of them use it when not necessary where some of them avoid it completely. These results influenced their intonation; therefore, their pronunciation and intelligibility. In addition, 40% of the students mispronounced some phonemes. This is due to the influence of their mother tongue. For instance, some of them have problems pronouncing the / η / in <raining>, because / η / sound does not occur in Algerian Arabic dialect, it is replaced by / η k/ /ηg/. They have also problems of final ed; however, this variable does not affect a lot their intelligibility or pronunciation. This is followed with articulation mistakes with 36%. Some students tend not to articulate words correctly especially when reading the second sentence. Others seem to swallow some phonemes, which leads to its mispronunciation, as well as the whole word.

Finally, only 20% of the informants' speed was not constant. Some of them read it too quickly and others were too slow. This variable influences their rhythm and intonation, because when reading slowly the sentences, in particular the those type of utterances, the rhythm will be destroyed therefore the occurrence of Rise and fall is not respected.

To sum up, it can be said that the the Oranee EFL learner produce English declarative questions using a rising terminal contour. However, this rising contour should have a slope value above 30Hertz; otherwise, it is not produced as an interrogative rising realizing a declarative question. It is also observed that, the informants with a rising slope under 30Hertz try to imitate the intonation of the Oranee dialect declarative questions, since producing a declarative question with a rising slope under 30Hertz in the ORD does not change anything. At the contrary, the informants succeed in realizing an interrogative

statement in Oranee dialect. Therefore, their mother tongue plays an important role in their English productions.

Concerning the French productions, the recordings were considered as representative due to the level of the students. In fact, the informants had many difficulties reading the French sentences. Consequently, their production could not represent the correct French intonation for declarative questions. Therefore, according to their poor knowledge of this language, it can be assumed that it did not influence their English productions. However, further research needs to be conducted to prove these claims.

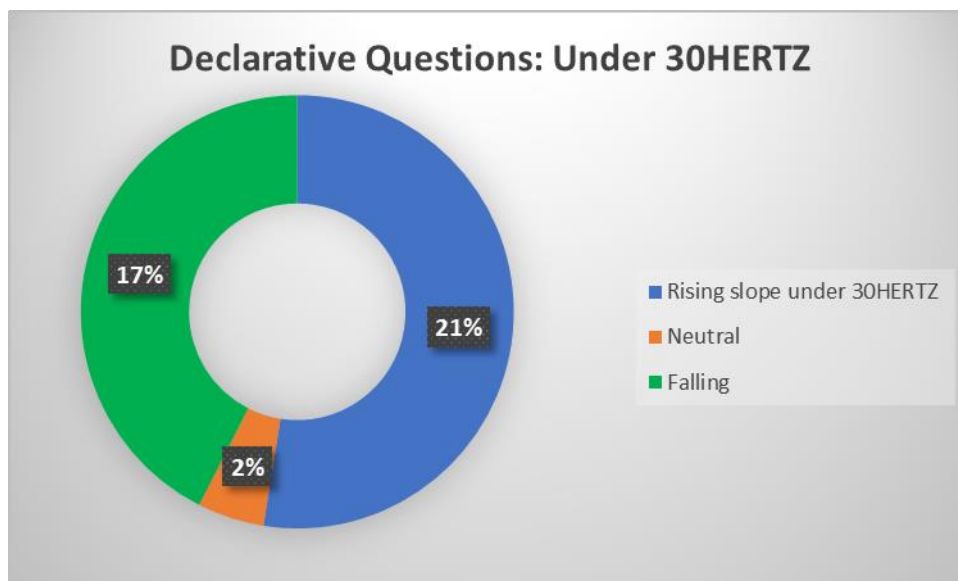
### **7.3. Testing the Audio-Visual Explanations versus The Distracted Imitation Method**

#### **7.3.1. Pre-test Results**

The findings of the pre-test recordings show that 40% of the informants did not use the right intonation in producing English declarative questions. This percentage is divided as illustrated in the following table:

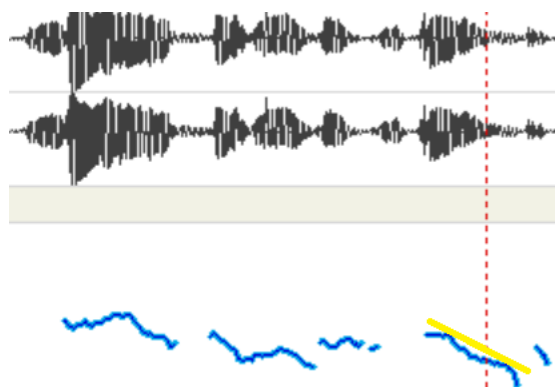
<b>Pitch Contours</b>	<b>Percentage</b>
Rising slope under 30 Hertz	21%
Neutral	2%
Falling	17%

**Table 18:** Declarative Questions: Under 30HERTZ Produced by Oranee Learners



**Figure 33:** Declarative Questions: Under 30HERTZ Produced by Oranee Learners

Thus, producing a rising terminal contour does not signify that the informant succeeded in uttering a declarative question. In fact, 21% of the production ended with a rising contour in their final syllable, yet the production of the statements did not sound as a question. One possible explanation is that they tried to imitate the intonation of the Oranee dialect declarative questions, since producing a declarative question with a rising slope under 30Hertz in the ORD does not change anything. At the contrary, the informants succeed in realizing an interrogative statement. Therefore, their mother tongue plays an important role in their English productions. Consider the following example:



**Figure 34:** Utterance 5 / Informant 5



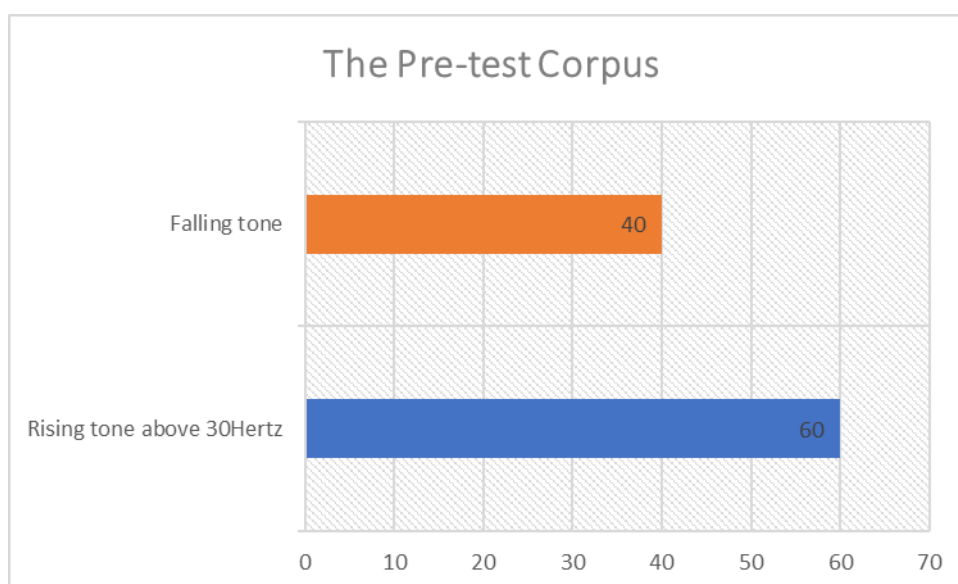
It can be noticed from the analysed sentence that intonational curve is progressively declining or falling, until the last syllable of the last word. This result is a counterexample of the preceding findings. However, one explanation is that the informant failed in producing a declarative question using the right intonation and melodic contour. As a matter of fact, her realisation does not sound natural. It sounds as a flat statement or a declarative sentence. The falling contour in the last syllable gives the impression that the informant is not sure about what she is saying.

Yet, it is important to mention that intonation is the only problem the informants face during their production. They also have troubles with loudness. Some of them use it when not necessary where some of them avoid it completely. These results influenced their intonation; therefore, their pronunciation and intelligibility. In addition, 40% of the students mispronounced some phonemes. This is due to the influence of their mother tongue. For instance, some of them have problems pronouncing the / ŋ / in <raining>, because / ŋ / sound does not occur in Algerian Arabic dialect, it is replaced by / ŋ k/ /ŋg/. They have also problems of final ed; however, this variable does not affect a lot their intelligibility or pronunciation. This is followed with articulation mistakes with 36%. Some students tend not to articulate words correctly especially when reading the second sentence. Others seem to swallow some phonemes, which leads to its mispronunciation, as well as the whole word.

Finally, only 20% of the informants' speed was not constant. Some of them read it too quickly and others were too slow. This variable influences their rhythm and intonation, because when reading slowly the sentences, in particular the those type of utterances, the rhythm will be destroyed therefore the occurrence of Rise and fall is not respected.

18% of the rest of informants used a falling terminal contour in their last syllable which made their realizations sound as declarative statements. Finally, 2% of the students used a neutral tone failing in producing the correct intonation of those utterance.

Yet, 60% of the informants succeeded in producing the right melodic contour which realises the intonation of declarative questions. Consequently, they will not participate in the post test recordings. In fact, only informants who did not produce a correct intonation will be tested in other to see whether the distracted imitation method or the video phonetic awareness (audio-visual explanations) help them improve their realisation. Those informants represent 40% of the whole corpus. Thus, the pre-test corpus is constituted of 32 students.



**Figure 35:** The Pre-test Corpus

The next part of the research presents results of the post-test recordings. Data procedure is detailed in chapter 6. As matter of fact, these results allow the research to move on to the second step which is related to the students' improvement of their performance. Now it is confirmed that intonation are the major factor that influences their pronunciation, we can see if its practice through modern and computerizes learning

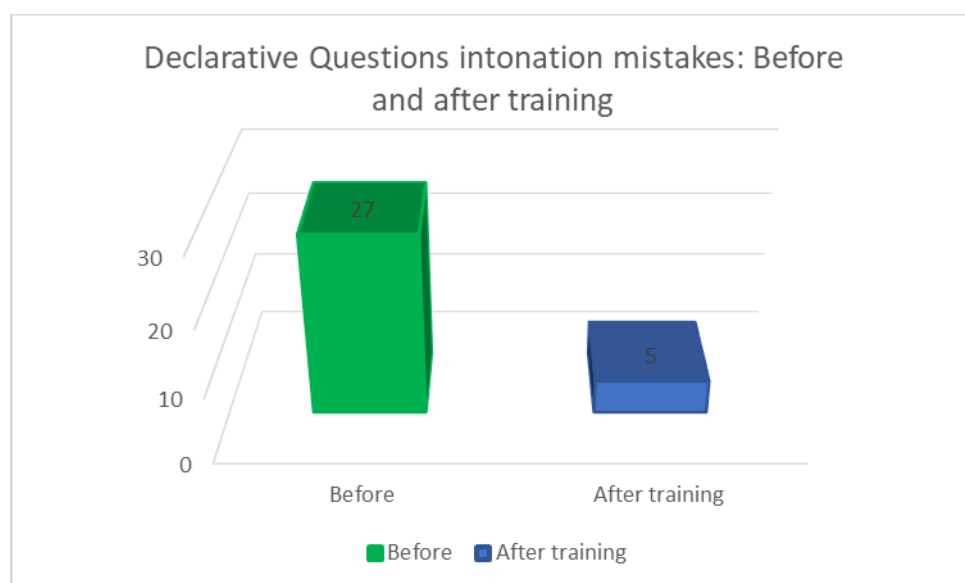
methods (imitation and audio-visual awareness) permit the achievement of a good pronunciation.

### 7.3.2. Results of the Post-test Recordings

The second part of the research concentrates on testing the efficiency of two teaching intonation methods: a distracted imitation task versus the visualization of a video with an instructor explaining the articulatory features declarative questions. Thus, the study raises the following question:

2. Are videos and awareness raising with the help of hand gestures as efficient as imitation regarding the acquisition of English declarative questions for Oranee learners?

Before comparing the efficiency of both methods, it would be interesting to discuss whether learners improved their realisation after training. Consider the following table:

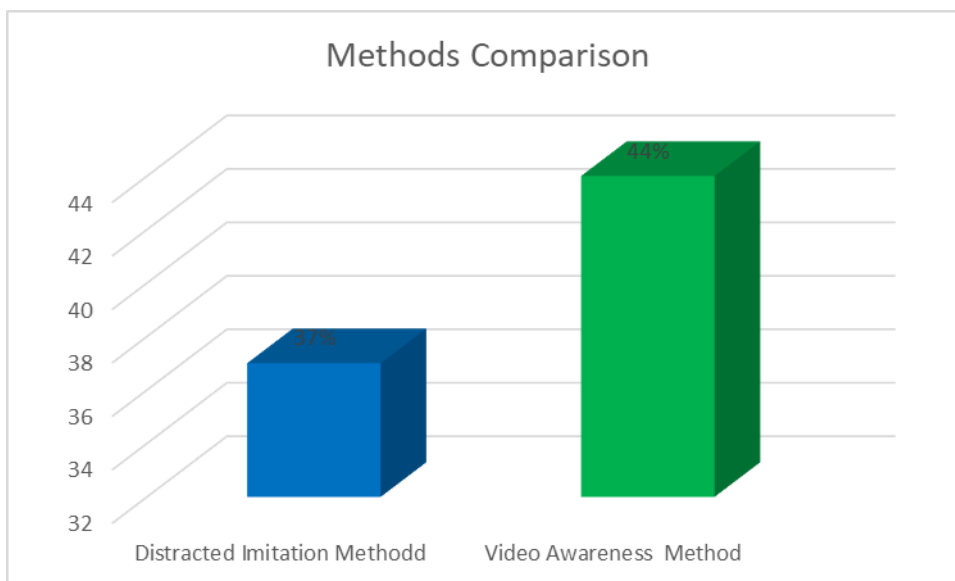


**Figure 36:** Declarative Questions by Oranee Learners Before and After training.

It is clear from the above graph that training has a great impact on learners' performance. Only 5 informants failed in producing the right rising intonation above 30Hertz. This was due to the influence of their mother tongue, in addition to the type of method of collecting data which was "read speech". In fact, those type of utterances are generally used in a spontaneous way to ask questions. They are considered as a grammatical and syntactic simplified way to ask questions.

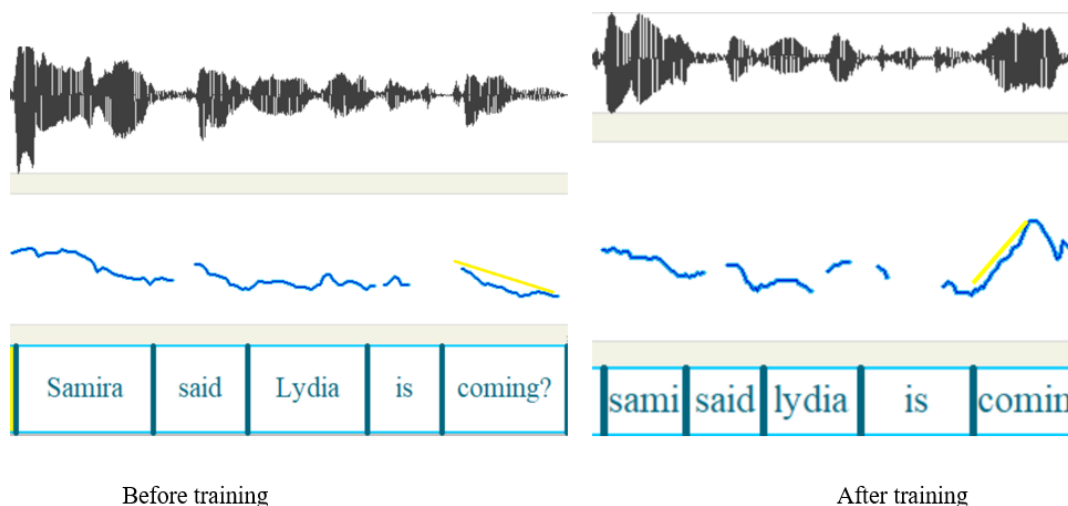
Yet, 27 informants out of 32 succeeded in producing the rising tone movement. There is a significant before after training performance. Compare the realisations of the pre-test and post test recording of the utterance:<Samira said Lydia> by an informant who failed in his first production. Most informants improved their performance after both trainings.

After dividing the thirty-two informants into two groups in order to test the distracted imitation method and the video awareness, results show that rising intonation contour increased up to 38% during the imitation test and up to 42% during the video awareness learning. If we consider the following graph, we can notice that 44% of group one succeeded correcting their intonation after their video awareness lecture. Whereas 37% of the informants of group 2 improved their rising intonation when having the distracted imitation task.



**Figure 37:** Methods Comparison

Therefore, students' performance as a whole was improved from 60% (pre-test recording before training) up to 94% (pre-test and post-test training recordings if we consider the 34% of intonation improvement after training).



**Figure 38:** Informant Realisation Before and After Training

It was also observed that improvement was not only at the suprasegmental level, but also at the segmental one. When being in front of a native model, learners tend to imitate some sounds that do not exist in their mother tongue. For example, one informant

succeeded to realise /ŋ/, instead of saying /ng/. Yet, this hypothesis cannot be confirmed since the number of examples was not consistent.

Rising patterns already exist in their L1 system; thus, they did not struggle repeating this rising contour in their final syllable. Some researchers argue that patterns who do not exist in L1 are complicated to be repeated even though they listened to a native speaker (Jessop & Sukuki, 2015). Informants may not perceive efficiently the correct sounds and prosodic feature since their brains do not contain the neurolinguistic path responsible for learning and performing speech. Imitation might be totally efficient with practice and perseverance.

Moreover, it is reasonable to provide and combine this method with a variety of other tasks (e.g. grammatical tasks, syntactic and comprehensive test etc.) This may explain the difference in percentage in the results when comparing distracted imitation and video awareness method. In fact, multimedia intonation awareness provides both explanations about the pattern and correct pronunciation of the utterances. In addition, they permitted learners' produce the correct intonation form in full autonomy. This kind of learning is referred to as passive learning which does not oblige students to make effort and concentrate only on the acquisition of those patterns.

Only one informant failed realising the rising tone which forms declarative questions. However, his performance was influenced by the quality of his voice and his segmental pronunciation. He struggled pronouncing some sounds, consequently, he concentrated his speech on segments rather than pronunciation. And, as the form of the utterance was declarative, he also did not pay attention to the question mark to produce the rising intonation contour responsible for producing questions.

Among the 6% of the remaining informants who failed realising their rising intonation contour, two of them had English perception difficulties. This might be due to

their academic level. Therefore, it can be concluded that imitation task is closely related to the level of proficiency of learners. The less proficient they are, the less the method is efficient. Other research needs to be conducted to test the effectiveness of the imitation method taking into consideration learners' English level by dividing the learners into groups: poor, intermediate and high levels.

The three remaining informants were not involved in the research. In fact, they did not take it seriously and did not consider the video and imitation exercise. They requested to repeat the experience, yet it was not possible since it would have not respected the research process and conditions. Therefore, to not impact the results, their recordings for the post test were not taken into account.

#### **7.4. Conclusion**

To sum up, it can be said that the the Oranee EFL learner produce English improved their performance after both trainings. Therefore, distracted imitation learning and video awareness based on explanations are efficient in learning English pronunciation. However, the efficiency of imitation is constrained by other factors, such as learning vocabulary, grammar and the linguistic insights.

Multimedia intonation awareness provides both explanations about the pattern and correct pronunciation of the utterances. In addition, they permitted learners' produce the correct intonation form in full autonomy. Phonetic awareness gave the possibility to learners to correct their segmental pronunciation by listening to the English teacher, as well as understanding the function of the rising contour and the importance to go beyond 30 Hertz when producing the slope.

## **General Conclusion**



The purpose of this PhD research is first to describe the English intonation of Oranee speakers in terms of tone choice when producing declarative questions during their read speech. It, therefore, provides a comparison (similarities and differences) between the Standard British English F0 movements of the interrogative focus in declarative questions and those produced by Oranee English users. Yet, before conducting this comparison, the intonation features of the interrogative tones of the Algerian Oranee dialect in the same context will be described, with the goal of providing a basic characterization of it.

The last part of the thesis aims at testing the efficiency of two pronunciation teaching methods involving Wrembel's framework: the audio-visual explanations versus the distracted imitation amongst Oranee learners of English in learning English declarative questions.

The actual work is divided into seven chapters. The first part comprises five chapters which permit to establish a theoretical framework related to our research questions. As a matter of fact, the first chapter explains the process of learning a foreign language and the difficulties a learner faces compared to acquiring a first language. The aim of this chapter is to understand those natural and predisposed human parameters to help learners overcome those challenges.

The second chapter introduces English pronunciation in the domain of English as a second language (ESL) and English as a foreign language (EFL) teaching. It outlines the status and role of pronunciation throughout time, explaining the reasons why pronunciation has always been neglected at schools and universities, showing the impact of the lack of pronunciation on the development of English for foreign learners. Finally,

it seeks to explain what is meant by RP pronunciation and what are its components; segmental and supra-segmental aspects.

The next chapter provides an overview of two learning and teaching techniques to be implemented in the present research. It describes the role of imitation as an instruction method, tackling the use of mirror neurons and motor responses in learning. In addition, it tries to illustrate the difference between the aforementioned method with the audio-visual one which involves learners' phonetic awareness which is closely related to the cognitive theory of multimedia theory.

Chapter four proposes a theoretical background to understand the intonation of the RP English intonation. In fact, the main objective of the research is to investigate the behaviour of RP intonation when produced by Oranee students. Therefore, this section presents the function of RP English intonation in relation to intelligibility and language comprehensibility. Then, a short description of declarative questions is presented, since the whole study is based on this kind of interrogative statements. Finally, melodic contour categories are defined in order to define a model for the research prosodic analysis.

It also provides a linguistic background of the targeted language variety used in this research (Chapter 5), which is the Oranee dialect. First, it presents the difference between Classical, Modern Standard and Algerian Arabic. The reason behind it is to restrict the research to only one variety, which has peculiar linguistic parameters and characteristics. In addition, Standard Arabic Intonation is described in order to distinguish it from the one of the Oranee dialect. The last point discussed in this part is the status of the French language as a second language in Algeria, to attest whether it has an impact on the informants' English realisation. It also provides a description and a comparison between the Algerian Arabic phonetic inventories.

The sixth chapter regroups the experimental study and research methodology used to fulfil the thesis objectives. It aims at answering the research questions mentioned above by following a particular research methodology. The first section presents the participants or informants of the study, in addition to the material and the research corpus. The aim of the first section is to afford a description of the prosodic features of Oranee English intonation in read speech and the factors influencing the intonational production of those speakers. It also, provides the used methodology for conducting a micro qualitative experimental research procedure which tackles the efficiency of two teaching intonation methods involving Wrembel's framework: a distracted imitation task versus the visualization of a video with an instructor explaining the articulatory features declarative questions. Results and discussions are highlighted in the last chapter

To start with, the results of the questionnaire can confirm the hypothesis that students are not interested in their pronunciation and do not have the corresponding and quality learning methods to improve it. The results further show the confusion in students' opinions. On one hand, they agree that pronunciation is very important for the intelligibility of speech and on the other one; they are not interested in and will not practice it even if they want to, owing to the lack of training in the classroom and at home. More importantly, the majority of the students don't use the suprasegmental feature in their speech, which in turn has a considerable influence in their pronunciation. The findings of the questionnaire and these informants helped the research to move on to the second part of the research taking into account their motivation and their expectations concerning quality methods of learning.

The results of the pre-test recordings have shown that the majority of the informants produced a rising melodic contour in the last stressed syllable of the final word in Arabic declarative questions. Whereas, the other preceding syllables were whether with

a flat or a falling tone. The study also revealed that statements produced with a falling intonation contour in the last syllable of the last word are considered as declarative sentence. In addition, although the value of the rising slope was under 30Hertz, the production of the utterance was a question. The falling terminal contour present in the informant's productions cannot be used as a valid or representative variation of realizing declarative questions, since only one informant uttered it this way. Therefore, it can be concluded that this contour is not a generalisation, but an exception due to the type of recordings which was read speech.

The recordings related to the English production of declarative questions by the Oranee learners show that the informants produce English declarative questions using a rising terminal contour. However, this rising contour should have a slope value above 30Hertz; otherwise, it is not produced as an interrogative rising contour, realizing a declarative question. The study also revealed that the informants with a rising slope under 30 try to imitate the intonation of the Oranee dialect declarative questions, since producing a declarative question with a rising slope under 30Hertz in the ORD does not change anything. At the contrary, the informants succeed in producing an interrogative statement. Therefore, their mother tongue has a great impact on their English production.

Concerning the French productions, the recordings were considered as representative due to the level of the students. In fact, the informants had many difficulties reading the French sentences. Consequently, their production could not represent the correct French intonation for declarative questions. Therefore, according to their poor knowledge of this language, it can be assumed that it did not influence their English productions. However, further research needs to be conducted to prove these claims.

The post-test recordings showed that the Oranee EFL learners improved their performance after both trainings. Therefore, distracted imitation learning and video

awareness based on explanations are efficient in learning English pronunciation. However, the efficiency of imitation is constrained by other factors, such as learning vocabulary, grammar and other linguistic insights.

Multimedia intonation awareness provides both explanations about the pattern and correct pronunciation of the utterances. In addition, they permitted learners' produce the correct intonation form in full autonomy. Phonetic awareness gave the possibility to learners to correct their segmental pronunciation by listening to the English teacher, as well as understanding the function of the rising contour and the importance to go beyond 30 Hertz when producing the slope.

As mentioned previously, the research has as a main objective to describe and characterize the Oranee and English intonation in declarative questions. In addition to draw a didactic proposal for teaching English aspects and patterns. Although the research was revealing, yet it is important to take into account the limitations that were present during the research. First, the number of participants was limited; however, generalized results were not the objective of the study, since it follows a qualitative research procedure. In addition, it would be more worthwhile to work with spontaneous speech, because it provides concrete data which is not influenced by any other factors. Even Though the obtained results with read speech was objective and valid.

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## Appendices

### Appendix I

#### The Questionnaire:

1/Pronunciation is important for intelligibility

- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree

2/Pronunciation is practised enough during our lessons

- Agree
- Disagree

3/I practise pronunciation at home

- Daily
- One a week
- Occasionally
- never

4- I do not practice pronunciation because

- I'm not interested in
- I do not have time
- Other...

5/ Do you have an idea about word and sentence stress?

- Word stress
- Sentence stress
- Nothing

Appendix II

Classification of NAE Consonant Phonemes							
Manner of Articulation	Place of Articulation						
	Bilabial	Labiodental	Dental	Alveolar	Palatal	Velar	Glottal
Stop							
Voiceless	p			t		k	
Voiced	b			d		g	
Fricative							
Voiceless		f	θ	s	ʃ		h
Voiced		v	ð	z	ʒ		
Affricate							
Voiceless					tʃ		
Voiced					dʒ		
Nasal							
Voiced	m			n		ŋ	
Liquid							
Voiced				l	r		
Glide							
Voiced	w				y		