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Enhancing Perceptual Accuracy and Listening Comprehension in Algerian EFL Students through Explicit Instruction of Connected Speech Processes: A Case Study of First-Year Students at ENSB

Thesis Submitted in Fulfillment of the Requirements for the Degree of Doctorate in English Linguistics and Didactics

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Abstract

Natural spoken English involves connected speech processes such as assimilation, linking, elision, and reduced forms of function words, which often hinder EFL learners' listening comprehension. These modifications can render even familiar words unrecognizable. This study investigates the effectiveness of explicit instruction in connected speech processes on the listening skills of first-year Algerian EFL students at ENS Bouzareah. Grounded in phonological and language acquisition theories, the research employs a quasi-experimental design with 108 participants, divided into control and experimental groups. Conducted over five months, data collection involved pre- and post-tests, student and teacher questionnaires, and document analysis. The student questionnaire was administered to the experimental group, while seven EFL teachers provided insight into current practices and challenges in teaching listening and pronunciation. Results reveal that targeted instruction significantly improves students' perceptual accuracy and listening comprehension. Students also expressed positive attitudes toward the training. Teacher responses highlighted persistent challenges, including discrepancies between spelling and pronunciation and the lack of appropriate materials. The findings emphasize the value of integrating connected speech instruction and pronunciation-focused listening activities into EFL curricula. Additionally, the document analysis of first-year phonetics and listening syllabi revealed a lack of explicit focus on connected speech processes. The study underscores the need to revise curricular content and to support professional development for teachers to enhance listening instruction in EFL contexts.

Keywords: Perceptual accuracy, listening comprehension, connected speech, assimilation, linking, elision, EFL, Algerian higher education

Dedication

I dedicate this humble work to all the people who love me and whom I love. Your constant support, encouragement, and belief in me have been the driving force behind my achievement. This thesis stands as a tribute to our shared journey, and I am profoundly grateful for your presence in my life.

To my dearest parents: thank you very much for being all the time by my side.

To my sisters and brothers; my brother in law and sisters in law; my nieces and nephews.

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List of Abbreviations

EFL: English as a Foreign Language

ELF: English as a Lingua Franca

ENSB: École Normale Supérieure de Bouzareah (also referred to as Teacher Training College of Bouzareah)

ESL: English as a Second Language

G.A.: General American

L2: Second Language

R.P.: Received Pronunciation

General Introduction

General Introduction

1. Motivation and Context of the Study

While it is widely recognized that learning English speech sounds, including consonants and vowels, is crucial in the language learning process, it is insufficient to rely solely on mastering these individual sounds to effectively comprehend and produce the spoken language. This is because when these separate sounds come together to create words, they often undergo modifications, especially when transitioning from one word to another. These changes include variations in pronunciation, especially across word boundaries.

Over the past fifteen years of teaching English phonetics and pronunciation at ENS Bouzareah, it has become evident that many Algerian EFL students experience difficulties in perceiving speech accurately and comprehending spoken English. These difficulties are especially evident when learners are exposed to natural spoken language, where, unlike in written texts, words are not clearly separated. Instead, sounds often blend across word boundaries, making it difficult for learners to identify individual lexical items. At these junctures, adjacent sounds influence and modify one another, resulting in forms that may be unrecognizable to non-native listeners (Alameen & Levis, 2015; Field, 2003; Henrichsen, 1984; Vandergrift, 2007). These recurring challenges observed in classroom settings have motivated the present investigation into the role of connected speech processes in listening comprehension.

This research deals with four main processes. In English, a phoneme may be realized differently as a result of the neighboring sounds of the preceding or following words; this process is called “assimilation”. A phoneme of a word may also be joined to another phoneme of the following word; this is referred to as “linking” or “liaison”. Other phonemes may totally disappear, this is known as “elision”, or a word may simply be reduced; this is called “reduction”. These phonological modifications─ assimilation, linking, elision, and reduction ─ are regarded as complex phenomena that are worth examining in order to ease EFL learning and develop efficient competencies.

Why investigate connected speech in English? Connected speech is considered as a universal phenomenon that all languages make use of due to "economy of effort" in which the speakers tend to make less articulatory effort when producing a sequence of words. Thus, they tend to minimize articulatory effort and maximize ease of articulation; but the way they do varies from one language to another.

To illustrate this point, the example "ten cars" is often used to show the different articulatory movements both in careful speech /ten kɑ:z/ and in rapid natural speech [teŋ kɑ:z]. In careful (unnatural) pronunciation, the last phoneme of the word "ten" /te**n**/ is an alveolar sound in which the tongue is pressed against the alveolar ridge. In natural rapid speech, however, the /n/ will become /ŋ/ before the velar sound /k/, articulated with the back of the tongue pressed against the velum (or the soft palate) instead of the alveolar ridge. In this case, the tongue does not have to make the long way to the alveolar ridge and go back to the velum; it rather assimilates with the preceding sound /k/; and the sound /n/, being influenced by the next velar sound, becomes velarized /ŋ/.

Therefore, when words are spoken in connected speech, they undergo various modifications. These modifications are a result of the natural tendency for speakers to simplify their speech for better or faster communication. Native speakers are accustomed to these changes and can understand them naturally, but a number of researchers have observed that these changes may pose a challenge for EFL students. Even though they may be familiar with individual words in their isolated or citation forms, the altered pronunciation in connected speech can make them unrecognizable. Specifically, EFL students may face difficulties in accurately segmenting and distinguishing individual words due to the modifications that occur in connected speech and also accurately comprehending and decoding spoken language, as they struggle to separate words within the stream of speech (Brown, 2011; Field, 2008; Vandergrift and Goh, 2012). However, focusing on listening comprehension skills and becoming familiar with the way native speakers actually speak, rather than solely relying on isolated vocabulary practice, may help students understand connected speech and enhance their ability to comprehend and communicate effectively in English.

Spoken English Spoken English—particularly in native varieties such as Received Pronunciation (RP) and General American (GA)—often differs from written English in

terms of pronunciation, stress patterns, connected speech, and other features. If EFL students come across words they are familiar with in written or citation form but struggle to recognize them when spoken due to sound modifications at word boundaries, it can distract them from understanding the main message or content of the conversation. This may cause them to focus more on decoding and processing the spoken words, leading to difficulties in comprehending the overall conversation and understanding the intended meaning and context. Additionally, this can result in mental fatigue, decreased listening efficiency, and frustration.

Many researchers agree on the importance of perceiving and understanding aspects of connected speech to promote intelligibility especially when communicating with native speakers (Brown, 1990; Celce- Mercia et al. 1999; Roach 1991). However, little emphasis is put on learning these features productively (Jenkins, 2000; O'Connor, 1980). By insisting on learning these features perceptually and not productively, learners need to comprehend native speakers' speech but they are not required to achieve native-like pronunciation which remains an unrealistic goal. Thus, foreign students are more likely to come across these processes through the listening skill they acquire inside or outside the classroom.

Why investigate listening comprehension in relation to connected speech processes? Listening is considered a powerful tool for language learning and communication. According to Vandergrift and Goh (2009), listening promotes various types of knowledge, including linguistic, pragmatic, and prior knowledge (i.e., the information and understanding that learners already possess). But they insist that linguistic knowledge is fundamental because it encompasses semantic, phonological, and syntactic knowledge. Linguistic knowledge, for instance, allows students to make sense of the sounds they hear in connected speech. Accordingly, many researchers (Brown, 1990; Celce-Murcia et al., 1996; Field, 2003) agree that the best way to improve learners' perceptual accuracy of connected speech features is through listening.

However, the listening materials utilized in the classroom frequently consist of simplified and clearly pronounced speech, aiming to assist non-native learners in understanding the spoken language. Mendelson (2006) states that such material fails to demonstrate many features that characterize the spoken language. Examples of these

features are articulatory rules of fast speech and distortion of word boundaries as a result of assimilation, linking, elision and reduced forms of function words. Teachers prefer to use this kind of "simplified" listening material in order to develop top-down skills, such as comprehending the gist of a text; however, little attention is given to bottom-up skills. Field (2003) and Rost (2006) call for greater attention to perceptual bottom-up skills; without these skills, breakdown of understanding may occur. For instance, learners may fail to recognize a particular word either because they know the word in its written form but not in its spoken form, or because students are unable to segment the word out of a piece of connected speech (Field, 2003).

2. Statement of the Problem and significance of the study

At the Teacher Training College of Bouzareah (ENSB), students are introduced to connected speech processes only in their third year of the English degree course. This delayed exposure means that learners spend their initial years without the necessary phonological awareness to decode naturally spoken English. Given that connected speech phenomena significantly influence listening comprehension, introducing them at such a late stage in the curriculum hinders students' ability to develop effective listening strategies early on. These processes are essential from the first year, when students begin engaging with authentic listening materials. Moreover, emphasis should initially be placed on perception rather than production, enabling learners to recognize and interpret reduced forms, linking, and assimilation in fluent speech. Early integration of connected speech instruction can thus support students in developing the listening skills required for successful communication in English.

As a matter of fact, these processes are always present in real-life conversations. When students are taught about connected speech processes earlier, they become more familiar with the patterns of natural spoken English, which helps them better understand what others are saying. This foundational awareness can later support more effective communication and pronunciation.

It has been observed that incorporating connected speech processes into listening classes can help promote a more balanced approach to learning a language. When students are exposed to connected speech patterns, they can better connect their listening skills

with their understanding of phonetic elements. This integration strengthens both areas simultaneously, as students get to practice and reinforce their ability to comprehend spoken language (Brown, 1990; Field, 2003, 2008; Vandergrift, 2008; Vandergrift & Goh, 2012).

Accordingly, providing explicit perceptual instruction on connected speech processes is necessary for students to overcome challenges related to the natural flow of spoken language. Moreover, developing skills in this area is essential for handling the complexities of natural spoken language, improving listening comprehension, and enhancing overall communication effectiveness in real-life settings. Therefore, explicit instruction can be beneficial in assisting students to enhance their skills in identifying words that undergo sound changes when positioned at the boundaries of words.

Furthermore, by introducing connected speech processes earlier in language learning, the phonetics curriculum can be more closely aligned with students' listening and language development. This alignment can help ensure a smooth progression in their learning process, as it may prevent sudden gaps or delays in their understanding of spoken language. By integrating connected speech processes, students can develop a more comprehensive understanding of how sounds and pronunciation work in real-life communication, leading to more effective language acquisition.

Finally, early exposure to connected speech processes can build students' confidence in their ability to understand authentic spoken language, and can empower them to engage in conversations with native speakers or in real-world contexts.

3. Research Aims

The scarcity of research in the field of ESL/EFL listening, particularly in the area of connected speech processes, brings attention to the need for further investigation. While only limited studies have addressed the challenges faced by ESL learners in understanding connected speech processes, the literature remains relatively unknown concerning both students' and teachers' viewpoints in the Algerian EFL context in general and at the Teacher Training College (ENSB) in particular. This lack of knowledge from both students and teachers perspectives highlights a significant gap in the literature. A more comprehensive study is required to gain deeper understanding of how connected speech

processes affect the listening comprehension of second/ foreign language learners. It is therefore felt necessary to conduct additional research in this area in order to provide valuable insights into the ways in which connected speech influences the ability of non-native students of English to understand spoken language in a second/ foreign language context.

The primary aim of this study is to investigate the effectiveness of teaching connected speech processes to first-year undergraduate Algerian EFL students at ENS Bouzareah (ENSB) in improving their perceptual accuracy and listening comprehension. In addition, the study seeks to explore teachers' perspectives on the teaching and assessment of connected speech processes at the undergraduate level. It also includes a document analysis of the first-year listening and phonetics syllabi to determine the extent to which these processes are explicitly addressed in the curriculum. This study aims to contribute to the existing literature on ESL/EFL instruction by examining the role of connected speech processes within the Algerian EFL context and offering pedagogical insights to enhance listening instruction and pronunciation-focused teaching practices.

This study is significant as it aims to address a critical gap in ESL/EFL instruction by focusing on connected speech processes, which are essential for effective communication yet often overlooked. Hopefully, the findings will shed light on students' experiences, perceptions, and attitudes towards connected speech processes, offering valuable information for improving strategies in teaching phonetics and listening comprehension.

Furthermore, by gathering teachers' viewpoints and experiences, the study aims to understand the strategies and techniques they use, as well as the challenges they face in teaching connected speech and listening skills in the EFL classroom. This comprehensive approach, considering both student and teacher perspectives, will enable the creation of targeted instructional methods for EFL learners in Algeria, emphasizing perceptual training to enhance comprehension of native speech and overall communication skills that are crucial for academic and professional success.

The study will contribute to the broader field of ESL/EFL instruction by emphasizing the early integration of connected speech processes into the curriculum. This integration is crucial for enhancing students' listening comprehension skills and familiarizing them with

natural English speech patterns essential for real-life conversations. By focusing primarily on the bottom-up approach, the study aims to improve students' ability to decode and understand speech, thereby enhancing their overall listening comprehension. This focus supports the development of skills necessary for grasping natural English speech patterns, which are vital for effective communication in real-life contexts. The comprehensive language learning approach adopted in this study integrates pronunciation instruction with listening practice, offering a more effective method for learning English. This approach aims to improve language learning outcomes for students in Algerian higher education.

4. Research Questions, Sub-questions and Hypotheses

Given the limited research on Algerian EFL students' ability to perceive and decode connected speech in natural spoken English, a quasi-experimental design was adopted to objectively measure the impact of targeted instruction. This design allows for a comparison between control and experimental groups, making it possible to assess the effectiveness of teaching connected speech processes on listening comprehension and perceptual accuracy. Accordingly, this research aims to evaluate whether explicit and systematic instruction over five months can enhance students' perception and comprehension of the four connected speech processes: assimilation, linking, elision, and reduced forms of function words. To this end, this study has devised five research questions. Two of these questions, each accompanied by related sub-questions and hypotheses, delve into students' perceptions and listening comprehension. The remaining questions address the perspectives of both students and teachers, and deal with the analysis of the current first-year listening and phonetics syllabi.

- **Research Question 1**

RQ1: Does perceptual training in connected speech processes lead to an improvement in EFL students' perceptual accuracy of these processes?

Research Question 1 stems from the observation that Algerian EFL students often struggle to perceive connected speech processes during listening comprehension tasks, as noted across several teaching sessions at ENSB. This difficulty frequently hinders their ability to understand spoken messages in class. Perceptual training may improve their ability to understand connected speech, particularly in assimilation, linking, elision, and reduced

forms of function words. Based on this assumption, the following hypotheses have been set up.

Hypotheses:

H_0: Perceptual training in connected speech processes does not lead to an improvement in students' perceptual accuracy of these processes.

H_1: Perceptual training in connected speech processes leads to an improvement in students' perceptual accuracy of these processes.

Research Question 1 and the two hypotheses aim to determine whether a perceptual training targeting connected speech processes leads to an improvement in students' perceptual accuracy of these processes.

Research Question 1 is further broken down into four sub-questions, each focusing on a specific connected speech process analyzed in this study.

Sub-question 1:

SQ1: Does perceptual training in assimilation lead to an improvement in EFL students' perceptual accuracy of this process?

Hypotheses:

H_0: Perceptual training in assimilation does not lead to an improvement in students' perceptual accuracy of this process.

H_1: Perceptual training in assimilation leads to an improvement in students' perceptual accuracy of this process.

The aim of Sub-question 1 and the two hypotheses is to investigate whether perceptual training on assimilation contributes or not to an enhancement in Algerian EFL students' perceptual accuracy of this process.

Sub-question 2:

SQ2: Does perceptual training in linking lead to improvement in EFL students' perceptual accuracy of this process?

Hypotheses:

H_0: Perceptual training in linking does not lead to an improvement in students' perceptual accuracy of this process.

H_1: Perceptual training in linking leads to an improvement in students' perceptual accuracy of this process.

The aim of Sub-question 2 and the two hypotheses is to determine whether perceptual training on linking contributes to an improvement in Algerian EFL students' perceptual accuracy of this process.

Sub-question 3:

SQ3: Does perceptual training in elision lead to an improvement in EFL students' perceptual accuracy of this process?

H_0: Perceptual training in elision does not lead to an improvement in students' perceptual accuracy of this process.

H_1: Perceptual training in elision leads to an improvement in students' perceptual accuracy of this process.

The aim of Sub-question 3 and the two hypotheses is to investigate whether perceptual training specifically on elision contributes to enhancing Algerian EFL students' perceptual accuracy of this process.

Sub-question 4:

SQ4: Does perceptual training in reduced forms of function words lead to improvement of EFL students' perceptual accuracy of this process?

Hypotheses:

H_0: Perceptual training in reduced forms of function words does not lead to an improvement in students' perceptual accuracy of this process.

H_1: Perceptual training in reduced forms of function words leads to an improvement in students' perceptual accuracy of this process.

The aim of Sub-question 4 and the two hypotheses is to investigate whether perceptual training on reduced forms of function words leads to an improvement in Algerian EFL students' perceptual accuracy concerning this process.

- **Research Question 2**

RQ2: Does perceptual training in connected speech processes─assimilation, linking, elision, and reduced forms of function words─improve EFL students' listening comprehension?

Drawing on the researcher's experience at ENSB, it was noted that Algerian EFL students struggle to understand spoken English involving connected speech features such as assimilation, elision, reduced forms, and linking. This informed Research Question 2, which explores whether explicit instruction can improve their listening comprehension.

Hypotheses:

H_0: Perceptual training in connected speech processes does not lead to an improvement in students' listening comprehension.

H_1: Perceptual training in connected speech processes leads to an improvement in students' listening comprehension.

Research Question 2 attempts to elicit data on the relationship between perceptual training in connected speech processes and listening comprehension.

- **Research Question 3**

It would be interesting also to find out about students' attitudes towards connected speech training.

RQ3: What are EFL students' attitudes toward explicit training on connected speech processes for improving listening in general, and connected speech learning and teaching in particular?

Research Question 3 aims to investigate how explicit training for connected speech processes affects students' listening skills, understanding of connected speech, and their

feedback on teaching methods. By exploring these aspects, the study aims to gain insights into students' experiences, perceptions, and attitudes towards connected speech processes.

- **Research Question 4**

Research Question 4 concerns the teaching of listening in general, and the teaching connected speech processes in particular.

RQ4: What are Algerian EFL teachers' attitudes towards teaching listening in general and connected speech in particular?

Research Question 4 aims to explore Algerian EFL teachers' attitudes and beliefs regarding the importance of connected speech in understanding spoken English and their familiarity with these processes. It addresses both the broader context of teaching listening skills and the specific context of teaching connected speech processes. Understanding teachers' perspectives is crucial as they play a significant role in guiding students' language learning.

- **Research Question 5**

Research Question 5 investigates how the first-year listening and phonetics syllabi address connected speech processes.

RQ5: How do the first-year listening and phonetics syllabi address connected speech processes?

The aim is to evaluate how effectively the first-year listening and phonetics syllabi incorporate and address connected speech processes, and to determine the extent to which these processes are integrated into the curriculum to support students' understanding and application of connected speech in real-world listening situations.

5. Research Method

This study employed a quasi-experimental design to examine the relationship between the independent variable—perceptual training on connected speech processes—and the dependent variable, which is students' performance in listening perception and comprehension. It features non-randomized control and experimental groups and uses

pretest-posttest measures to assess the effectiveness of the intervention. The participants consist of 108 first-year English degree students at the Teacher Training College at Bouzareah (ENSB) in Algiers, divided into two intact groups. One group of 54 students undergoes perceptual treatment sessions on connected speech processes, while the other 54 students serve as the control group. The study also incorporates qualitative data obtained through questionnaires administered to both students and teachers, aiming to gather insights into their experiences, attitudes, and perceptions regarding connected speech processes and listening instruction. In addition, a document analysis of the current first-year listening and phonetics syllabi was conducted to assess how connected speech processes are addressed in the curriculum. Data analysis involved the use of statistical tests and descriptive statistics to evaluate outcomes and responses from both groups, with an emphasis on maintaining controlled experimental conditions and triangulating data sources to ensure the reliability and validity of the findings.

6. Structure of the Study

The present study comprises a General Introduction, five chapters and a General Conclusion. Chapter One is entitled "Overview of Literature on Connected Speech Processes"; it provides a detailed and comprehensive overview of the theoretical concepts related to connected speech processes that are commonly found in real spoken English. These processes, such as assimilation, linking, elision, and the use of reduced forms of function words, are the result of speech simplification and play a significant role in shaping the rhythm of English. This chapter aims to explain each phonological process in depth, including definitions and examples, as well as including relevant technical terms. Additionally, it emphasizes the importance of teaching and learning connected speech processes in order to improve foreign language students' perception and listening comprehension skills.

Chapter Two is entitled "The Role of Phonological Awareness in Enhancing ESL/ EFL Listening comprehension". It provides insights into the perspectives held by both ESL/EFL learners and teachers regarding the process of listening. These perspectives are reinforced by reviewing relevant literature and empirical studies. It highlights the difficulties that second/ foreign language learners face when trying to understand spoken language at a basic level, as well as the crucial role of phonological skills in decoding and

comprehending spoken English for ESL/EFL learners. Additionally, it identifies the factors that hinder listening comprehension, including fast-paced speech, unfamiliar vocabulary, pronunciation difficulties, and limited contextual knowledge. The chapter also underscores the insufficient emphasis on teaching listening skills in ESL/EFL classrooms and addresses challenges such as task completion focus and difficulty in teaching perception activities. Finally, it stresses the significance of pronunciation instruction in improving listening skills, particularly in relation to connected speech processes.

Chapter Three is entitled "Research Method and Design". It explains the methodology used to conduct the study, covering aspects such as the research design, participants, tools, and data collection, and data analysis procedures. It highlights the use of multiple data collection tools, including pretest and posttest measures and questionnaires, in order to strengthen the robustness of the study. Applying triangulation in analyzing the data enhances the validity and reliability of the findings, leading to a more comprehensive understanding of foreign language listening instruction.

Chapter Four is entitled "Presentation and Analysis of the results". It aims to present the results obtained from comparing pretest and post-test scores to assess the effectiveness of the intervention and identify any significant differences between the scores of the control and experimental groups. In addition, the responses from the questionnaires completed by the students and the teachers are thematically analysed and presented through tables.

Chapter Five is entitled "Discussion of Results and Pedagogical Implications". It aims to thoroughly analyze and interpret the study's outcomes in relation to the research questions and hypotheses, and discuss them in comparison to findings from previous similar studies. While acknowledging the study's limitations, this chapter also explores the implications of the study for teaching and learning connected speech processes, with the ultimate goal of enhancing students' perception and listening comprehension of spoken English.

Chapter One: Overview of Literature on Connected Speech Processes

Chapter One: Overview of Literature on Connected Speech Processes

Introduction

The purpose of this chapter is to present a comprehensive and in-depth overview of the background literature related to connected speech processes that commonly occur in natural spoken English. It includes seven sections. Beginning with a focus on English sounds in isolation, Section 1.1 offers a detailed description of their defining characteristics, including place and manner of articulation and voicing. Understanding these characteristics is crucial for grasping how these sounds undergo changes in connected speech. Section 1.2 explains the reasons for sound changes, which result from speech simplification and significantly shape the rhythm of English. Section 1.3 defines the four most common connected speech processes, which are assimilation, linking, elision, and reduced forms of function words. Section 1.4 explores how these processes change depending on the formality of speech, in casual conversations and formal contexts. Section 1.5 provides detailed explanations of each phonological process, offering definitions and examples while incorporating essential technical terms. Additionally, Section 1.6 highlights the importance of teaching and learning connected speech processes in developing foreign language learners' perception and listening comprehension abilities. Finally, Section 1.7 emphasizes the priority of perception over production in teaching connected speech, underscoring its critical role in enhancing listening comprehension skills among L2 learners.

1.1 Describing English Sounds

Before dealing with the modifications that occur in connected speech, it is essential to understand the features of English sounds and the way they are affected by the environments in which they appear. Specifically, when English sounds are discussed in isolation, i.e. without context, they are characterised by some features such as place and manner of articulation, and voicing; but when they are placed alongside one another to form words, these features may undergo changes, especially at word boundaries. This is particularly obvious when discussing the consonantal changes that undergo assimilation,

and the vowel modifications that undergo reduction of function words. Thus, a brief review of the basic characteristics of English sounds, including consonants and vowels, and how these function in connected speech, is quite appropriate.

1.1.1 Consonants

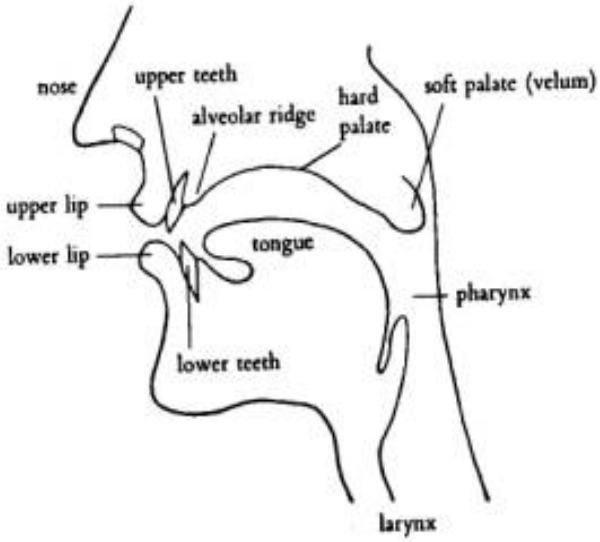
Most of the assimilations described in pronunciation textbooks include only consonantal elements (Avery & Ehrlich, 1992; Celce-Murcia et al., 1996; Gimson, 1968; Kelly, 2000; Roach, 1991) which may differ in three ways: differences in place of articulation, differences in manner of articulation, and differences in voicing. These differences will be discussed in detail in the following section.

1.1.1.1 Place of Articulation

The ability to produce sounds entails the use of certain movements and coordination of the speech organs. Figure 1.1 below shows the articulators that are involved in the production of sounds as well as the different points or places of articulation in the mouth.

Figure 1.1

Organs Involved in the Production of Speech



Note. Figure 1.1 is from *English Phonetics and Phonology* (p. 8), by P. Roach, 1991, Cambridge University Press.

Consonants are usually classified according to the position of the lips, teeth, tongue and palate, and this classification is as follows:

a. Bilabial: The two lips (lower and upper) are involved in the production of the bilabial consonants which are /b/, /p/, /m/, /w/.

b. Labio-dental: The upper teeth are pressed against the lower lip. The labio-dental consonants are /f/ and /v/.

c. Dental: The tongue is pressed against the upper teeth; these sounds are /θ/ and /ð/.

d. Alveolar: The tip of the tongue is pressed against the alveolar ridge; these sounds are /t/, /d/, /s/, /z/, /l/ and /n/.

e. Palato-alveolar: The tongue is pressed against the point separating the hard palate and the alveolar ridge. The palato-alveolar consonants are /ʃ/, /ʒ/, /ʧ/, /ʤ/ and /r/.

f. Palatal: The middle of the tongue is pressed against the hard palate; /j/ is the only palatal consonant in English.

g. Velar: The back of the tongue is pressed against the soft palate; these sounds are /k/, /g/ and /ŋ/.

h. Glottal: Two consonants can be produced with the glottis, which is the opening between the vocal cords inside the larynx. If the vocal cords come together to form a narrowing causing a friction, then the glottal fricative /h/ is produced. If the vocal cords are brought together tightly, causing a total closure followed by a sudden release of air, the glottal stop /ʔ/ is then produced. The glottal stop is not common in American English but very frequent in British varieties of English, especially Cockney, a London dialect, (Winkler 2007). "Today it's entirely standard to replace syllable-final [t] with [ʔ] before a consonant, whether the consonant is in the same word or not" (Lindsey 2019, p. 67). In other words, it is very common that /ʔ/ replaces /t/ in a word-internal before a consonant such as partner [pɑːʔnə], or in a word-final before a consonant such as Great Britain [greIʔbrItn] and get ready [geʔredI]. Though the glottal stop /ʔ/ is described as unvoiced glottal plosive, it is not considered as a significant sound in that it cannot change the meaning of a word (Underhill 1994), if the 't' in the word 'partner' is pronounced with /t/ or /ʔ/ the meaning of the word does not change.

1.1.1.2 Manner of Articulation

Manner of articulation refers to the way air is released when consonants are produced. Thus, the movements of the vocal organs cause either a total blockage or just a narrowing between them.

a. Plosive: There is a total closure of the speech organs followed by a sudden release of air. Plosive consonants are /p, t, k, b, d, g, ʔ/.

b. Fricative: Two articulators are brought closely together; so the air is forced through this narrow opening causing audible friction. Fricative consonants are /f, v, θ, ð, s, z, ʃ, ʒ, h/

c. Affricate: There is a total closure of two speech organs, specifically the tongue and the palate, followed by a slow release of air. Affricate consonants are /ʧ, ʤ/.

d. Nasal: Air is released through the nasal cavity when producing nasal consonants. It is important to consider the position of the soft palate (velum) when discussing speech sounds. When the soft palate is lowered and the passage through the mouth is blocked, air is released only through the nose, producing nasal sounds such as /m/, /n/, and /ŋ/ (while all remaining consonants and vowels are oral sounds). If the soft palate is raised, the nasal passage is blocked, allowing air to escape only through the mouth, producing oral sounds.

e. Lateral: There is a complete closure along the centre of the mouth, so air escapes through the two sides of the tongue. There is only one lateral sound in English /l/.

f. Approximant: There is an approximation of two articulators, and the air escapes along the centre of the mouth. Approximant consonants are /w, r, j/.

Table 1.1 below will serve as a reference to the place and manner of articulation of English consonants. Places of articulation are ordered from left to right and manners of articulation are ordered from top to bottom.

Table 1.1

English Consonants According to the International Phonetic Alphabet

		Place of articulation							
		Bilabial	**Labio-Dental**	**Dental**	**Alveolar**	**Palato-alveolar**	**Palatal**	**Velar**	**Glottal**
Manner of articulation	**Plosives**	**p b**			**t d**			**k g**	**ʔ**
	Fricatives		**f v**	**θ ð**	**s z**	**ʃ ʒ**			**h**
	Affricates					**tʃ dʒ**			
	Nasals	**m**			**n**			**ŋ**	
	Lateral				**l**				
	Approximants	**w**				**r**	**j**		

Note. Table 1.1 shows the English consonants according to the *International Phonetic Alphabet*, from *English Phonetics and Phonology* (p. 62), by P. Roach, 1991, Cambridge University Press.

After outlining the two parameters that describe the English speech sounds—place and manner of articulation—it is also important to describe a third parameter, which is voicing.

1.1.1.3 Voicing

Voicing refers to the vibration of the vocal cords. Sounds in are generally classified as either voiced or voiceless. The voiced sounds are produced with the vibration of the vocal cords, and the voiceless sounds are produced without it. Most English sounds are voiced, except for nine consonants: /p, t, k, f, θ, s, ʃ, ʧ, h/.

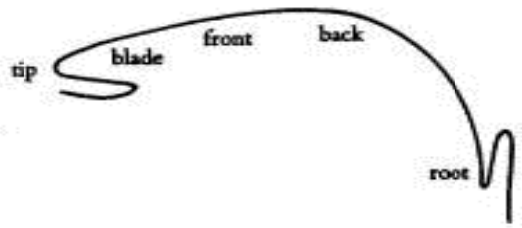
The next section deals with the second category of English sounds, the vowels.

1.1.2 Vowels

If consonants are produced with obstruction or narrowing somewhere in the vocal tract (which starts from the top of the vocal cords and extends to the nose or the lips), vowels are sounds that are produced with no blockage or obstruction of air; i.e. air escapes freely. On the other hand, if consonants are described according to their places of articulation, vowels have no real point of articulation since the articulator, in particular the tongue, does not come into real contact with another articulator (Millward & Hayes 2012). Instead, vowels are normally described with reference to three criteria. Figure 1.2 below represents parts of the tongue that are involved in the production of vowels; central is between front and back.

Figure 1.2

Sub-Division of the Tongue



Note. Figure 1.2 is from *English Phonetics and Phonology* (p. 9), by P. Roach, 1991, Cambridge University Press.

a. Frontness and backness: This is the part of the tongue that is used, it is either recognised: front, back, or centre.

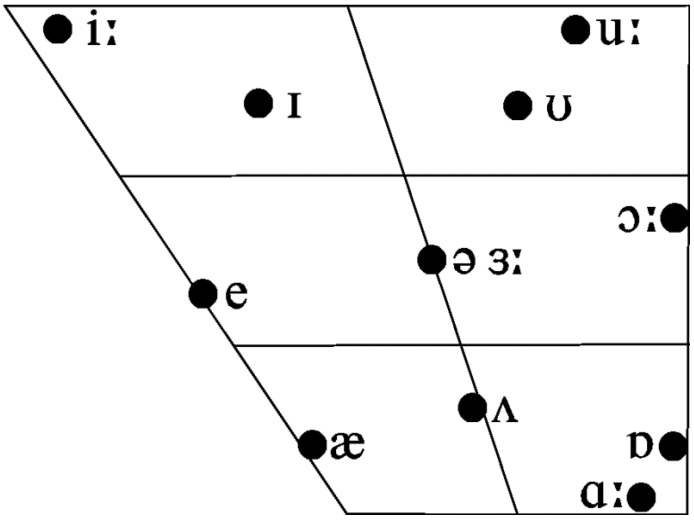
b. Closeness and openness: This is referred to as tongue height. It is to the extent to which the tongue raises to the direction of the palate; four degrees are distinguished: close, mid-close (half-close), mid-open (half-open), and open.

c. The opening formed by the lips: the lips can be either spread, neutral or rounded.

Although the tongue and lips assume a wide range of complex shapes for the articulation of different vowels, describing these speech sounds is based on a relatively simple system. This system, known as the cardinal vowel system, was first devised by the British phonetician Daniel Jones in the early 20th century. Figure 1.3 below shows how English RP vowels are approximately distributed on the cardinal vowel system. Though Figure 1.3 primarily represents vowels from Received Pronunciation (RP), the standard British accent, most vowels in General American (GA), the standard American accent, occupy nearly the same positions.

Figure 1.3

Approximate Distribution of the English RP Vowels



Note. Figure 1.3 is from *English Phonetics and Phonology* (p. 242), by P. Roach, 2004, Cambridge University Press.

Therefore, the vowel /iː/ is described as a close front unrounded vowel; /æ/ is described as an open front unrounded vowel; /uː/ is a close back rounded vowel, /ɒ/ is an open back rounded vowel; and finally /ə/ is a mid central unrounded vowel.

Many researchers (Abbood, 2018; Brown A., 2014; Dimitrova, 2010; McMahon, 2002; Smakman, 2020; Wells, 2007) have studied, extensively or briefly, differences between RP and GA vowels, and come up with the same conclusion. As table 1.2 below shows, most of the vowels are identical except for the ones highlighted in bold. The points of difference between the two accents are summarised below.

Table 1.2

Difference between RP and GA Short and Long Vowels

Frontness / Backness	**Examples**	**RP**	**GA**	**Tongue Height**	**Examples**	**RP**	**GA**
Front vowels	kit dress trap **grass** fleece face	ɪ **e** æ **ɑː** iː eɪ	ɪ **e** æ **æ** iː eɪ	**High vowels**	kit fleece foot goose	ɪ iː ʊ uː	ɪ iː ʊ uː
Back vowels	**lot** foot palm **thought** **goat** goose	**ɒ** ʊ ɑː ɔː **əʊ** uː	**ɑː** ʊ ɑː **ɔː** or **ɑː** **oʊ** uː	**Low vowels**	trap **lot** palm	æ **ɒ** ɑː	æ **ɑː** ɑː
Central vowels	about nurse strut	ə **əː (ɜː)** ʌ	ə **ər (ɜːr)** ʌ	**Mid-vowels**	face **goat** dress **lot** **thought** about nurse strut	eɪ **əʊ** e **ɒ** ɔː ə **əː (ɜː)** ʌ	eɪ **oʊ** e **ɑː** **ɔː** or **ɑː** ə **ər (ɜːr)** ʌ

Note. Examples in Table 1.2 are adapted from *An Introduction to English Phonology* (p. 45), by A. McMahon, 2002, Edinburgh University Press.

1.1.2.1 Short and Long Vowels

- RP has seven (7) short vowels /ɪ, e, æ, ʌ, ɒ, ʊ, ə/, the same vowels are found in GA except for the vowel /ɒ/. The word 'lot' has the short vowel /ɒ/ in RP, but in GA this phoneme does not exist, the vowel /ɑː/ is used instead; so the vowel in 'lot' /lɑːt/is the same as 'palm'/pɑːm/.
- The vowel /æ/ is pervasive in GA, so the words 'trap' and 'grass' have the same vowel sound /æ/, but in RP the two words have different vowel sounds, 'trap' has /æ/ and 'grass' has /ɑː/.
- Even though the sound /ɔː/ is used in GA, the vowel /ɑː/ is also used, as in 'thought'.
- In GA when vowels are followed by the letter 'r' in the spelling, they are characterized by r-colouring. The r-colouring is noticeable, for instance, in the vowel of 'nurse' /nɜːrs/ where special transcription symbols are used to show the pronunciation of this vowel /ɚː, ɝː/, but in RP 'r' in 'nurse' is not pronounced at all /nəːs/ (or /nɜːs/).

1.1.2.2 Diphthongs

- RP has eight diphthongs /ɪə/ 'hear', /eə/ 'there', /ʊə/ 'poor', /eɪ/ 'late', /aɪ/ 'five', /ɔɪ/ 'boy', /əʊ/ 'goat', /aʊ/ 'house'; however, GA does not have vowels ending in /ə/─/ ɪə, eə, ʊə /. In other words, in RP words such as 'here' /hɪə/, 'there' /ðeə/, and 'poor' /pʊə/, the 'r' after the vowels is not pronounced, but in GA these words end with the sound /r/ such as /hɪr/, /ðer/, /pʊr /.
- In RP, the word 'goat' is pronounced with a central starting point /əʊ/, whereas in GA a back starting point /oʊ/ is used.

Consonants and vowels are also referred to as phonemes. The term phoneme, according to Brinton (2000), means a distinctive or contrastive sound in a language. What she means by 'distinctive' in this context is that the sound makes a difference in meaning and has communicative value. If the phoneme /f/ of the word 'fit'/fɪt/, for instance, is replaced by another phoneme /p/, a new word with new meaning '*pit*' /pɪt/ is obtained. In turn, if the phoneme /ɪ/ of the word 'fit' is replaced by the phoneme /iː/, a new word with new meaning is formed 'feet' or 'feat' /fiːt/. As a unit of language, any phoneme

possesses a set of distinctive features which help distinguish it from other phonemes. For example, the phoneme /f/ has four distinctive features: it is an oral, voiceless, labio-dental and fricative; the phoneme /ɪ/ is described as a close front unrounded short vowel.

Having analysed the features and criteria classifying the English consonants and vowels in isolation, an examination of these sounds in context or connected speech will be the focus of the following section.

1.2 Defining Connected Speech

Brown and Kondo-Brown (2006) state that the reason there is a need to define connected speech is the variety of terminology used to describe this overall topic. Indeed, a number of terms describing connected speech is found in the literature, and aspects of connected speech have been "discussed for years in the language teaching field in a rather disjointed and scattered manner under headings like casual speech, colloquial speech, fast speech, informal speech, reduced forms, reduced speech, reductions, relaxed speech, and sandhi variation" (Brown & Kondo-Brown, 2006, p. 5).

Brown and Kondo-Brown (2006) present a collection of fourteen papers aimed at facilitating and promoting research on connected speech in applied linguistics. Their work offers an expanded variety of phonological phenomena related to connected speech, including word stress, sentence stress and timing, reduction, strong and weak forms of words, elision, intrusion, assimilation, transition (juncture), liaison, and contraction. However, the present study focuses on phonological processes occurring at word boundaries, such as assimilation, linking, elision, and reduced forms of function words. A number of more specific definitions are provided to describe these processes.

Crystal (2008, p. 101) defines connected speech as:

> A term used in linguistics to refer to spoken language when analysed as a continuous sequence, as in normal utterances and conversations. Its significance lies in the contrast implied with studies of linguistic units seen in isolation, such as an individual sound, word or phrase, which were the subject-matter of much traditional linguistic enquiry. It is now realized that important changes happen to these units when they are used in connected speech, as demonstrated by such processes as assimilation and elision, e.g. *and* becoming /n/ in such phrases as *boys and girls*. (Italics in original)

Crystal emphasizes the importance of studying spoken language as a continuous sequence rather than in isolated units. He highlights that individual linguistic units, such as sounds, words, and phrases, undergo significant changes when used in connected speech, through processes like assimilation and elision. These processes can affect the pronunciation and structure of words in real-life communication. Traditional linguistic studies might miss critical insights by focusing solely on isolated units. This perspective is crucial for analyzing speech processes, leading to more accurate and practical applications in fields like language teaching and speech recognition technology.

For Underhill (1994, p. 58), "a word is not just the sum of its individual sounds, and connected speech is not just the sum of its individual words." He stresses the idea that both individual words and their pronunciation cannot be understood in isolation. A word has its own characteristics and features that go beyond simply linking together the individual phonetic sounds. In spoken language, words often undergo changes in pronunciation due to connected speech processes like assimilation, elision, and linking. These processes alter the sounds within words and affect their overall pronunciation. Similarly, words are not pronounced in isolation but rather influence one another in a continuous stream of speech. Connected speech processes make the boundaries between individual words more flexible, as sounds blend together and modify depending on the sounds that come before or after them.

Underhill (op. cit.) explains further that "Continuous connected speech consists of a flow of sounds which are modified by a system of simplifications through which phonemes are connected, grouped and modified" (p. 58). This implies that sounds do not occur in isolation, they are rather preceded and followed by other sounds; likewise, words are not pronounced in isolation, they are preceded and followed by other words, causing modifications at word and word boundaries. Therefore, sounds and words do not occur in isolation; they are influenced by preceding and following sounds and words, leading to modifications at word boundaries.

1.3 Reasons for the Occurrence of Connected Speech Processes

There are mainly two reasons why connected speech processes occur: making articulation easy (often referred to as economy of effort) and preserving the characteristic rhythm of English.

1.3.1 Making Articulation Easy

Pinker (1995) describes articulatory simplifications by stating, "At first glance, phonological rules seem to be a mere summary of articulatory laziness" (p. 167). This suggests that phonological rules might initially appear to result from speakers simplifying their speech or taking shortcuts in articulation.

Connected speech processes occurring across word boundaries are generally perceived as attempts to make articulation as easy as possible, and are regarded as natural articulatory simplifications. Therefore, words pronounced in isolation, i.e. in their citation forms, become modified when pronounced as part of longer utterances. This is because vowels and consonantal segments may have different phonetic realisations compared to when they are uttered as part of words in citation forms (Low 2015). When speaking, "the movements of different articulators for the production of successive phonetic segments overlap in time and interact with one another" (Farnetani, 2007, p. 371), in order to enhance ease of articulation. Dalton and Seidlhofer (1994, p. 28) describe the movements of the vocal organs when producing connected speech as follows:

> If we look at each speech sound as a set of movements, it is only natural that series of movements as they occur in connected speech, individual sound segments follow each other so quickly that the tongue may never reach the 'ideal position' connected with a particular sound. It will only approximate to this position before it moves on to the position necessary for the next segment. The exact position of the tongue and other articulators during a segment therefore depends on where the tongue is coming from and where it is going: it depends on the neighboring sounds. That is the main reason why phonemes have a variety of different realizations.

Accordingly, when speech sounds are produced, the articulatory movements are influenced by the sounds that come before and after each sound segment, making it difficult for the tongue and other articulators to reach the right articulatory position for each sound. The exact positioning of the articulators during a segment is therefore dependent on the preceding and subsequent sounds, leading to a variety of realizations of

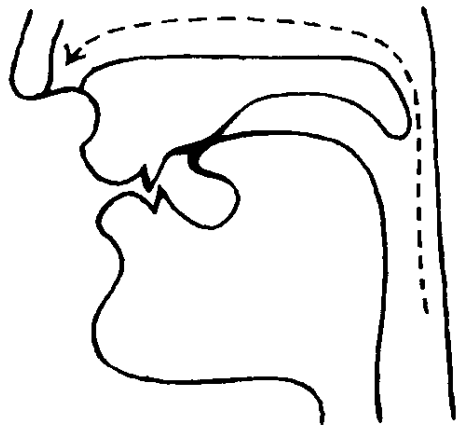
phonemes. This understanding highlights the dynamic nature of speech production and provides insights into phenomena such as assimilation and elision, ultimately contributing to a deeper comprehension of how language is produced in real-time speech contexts. By analyzing these articulatory adjustments and variations in phoneme realization in connected speech, valuable insights into the intricacies of speech production are gained, aiding in the understanding of language.

Gimson (1978) (as cited in Low 2015, p. 76) mentioned several factors leading to connected speech processes. One of these factors is the speed of the utterance which justifies the need for articulatory ease in order to speak faster. Another factor is the influence of the neighbouring sounds causing modifications at word boundaries such as assimilation and elision. In the same line, Dalton & Seidlhofer (1994) state that the phonetic modifications occurring at words and word-boundaries are probably responsible for the widespread feeling among foreign language learners that native speakers speak too fast.

To illustrate this point, the example of 'ten girls' is used to show the different articulatory movements both in careful speech /ten gə:lz/ and in rapid natural speech [teŋgə:lz], illustrated in figures 1.4, 1.5, and 1.6 taken from O'Connor, J. D. (1980). In careful (unnatural) pronunciation, the last phoneme of the word "ten" /te**n**/ is an alveolar sound in which the tongue is pressed against the alveolar ridge (as shown in figure 1.4).

Figure 1.4

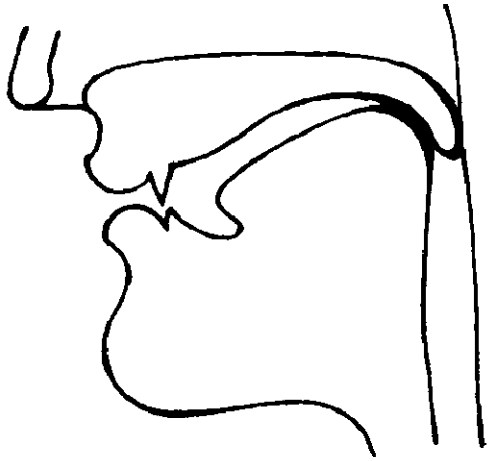
Articulation of the Sound /n/ in Isolation



In natural rapid speech, however, the /n/ becomes [ŋ] before the velar sound /g/, articulated with the back of the tongue pressed against the velum (or the soft palate) instead of the alveolar ridge (as shown in figure 1.5).

Figure 1.5

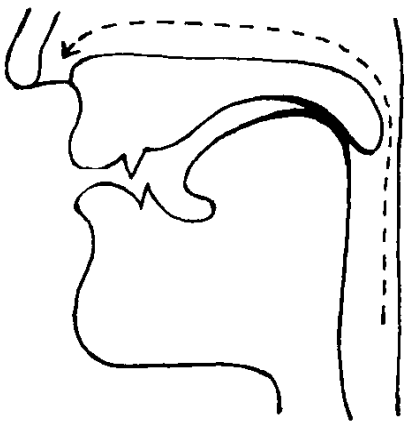
Articulation of the Sound /g/ in Isolation



In this case, the tongue does not have to make the long way to the alveolar ridge and go back to the velum, it rather assimilates with the preceding sound /n/ which is influenced by the following velar sound /g/, and becomes therefore velarized /ŋ/ (as shown in figure 1.6).

Figure 1.6

Sound /n/ Becomes [ŋ] Before the Velar Sound /g/



It is important to mention that the previous example deals with regressive assimilation in which the influence of the phoneme /g/ spreads to the preceding sound /n/ in the phrase '*ten girls*'.

Pinker (1995, p. 168) explains the process of communication in the presence of phonological processes from the speakers' and the listeners' viewpoints as follows:

> Every act of sloppiness on the part of a speaker demands a compensating measure of mental effort on the part of the conversational partner. A society of lazy talkers would be a society of hard-working listeners. If speakers were to have their way, all rules of phonology would spread and reduce and delete. But if listeners were to have their way, phonology would do the opposite: it would enhance the acoustic differences between confusable phonemes by forcing speakers to exaggerate or embroider them. And indeed, many rules of phonology do that.

This suggests that phonological rules are shaped by the balance between speakers' tendency to simplify speech and listeners' need for clarity. However, for non-native speakers, especially second or foreign language listeners, this balance becomes even more crucial. They might struggle with simplifications that native speakers use naturally, and therefore require more mental effort to understand with native speakers' speech. Conversely, native speakers in turn are forced to produce the phonemes of words clearly and accurately by using less phonological modifications if they want to be understood by non-native listeners.

1.3.2 Preserving the Characteristic Rhythm of English

Connected speech processes also serve to preserve English rhythm. Crystal (2008, p. 417) defines rhythm as "the perceived regularity of prominent units in speech," by which he means the stressed syllables. In fact, languages can have one of two different types of rhythm, stressed-timed or syllable-timed. For Levelt (1989), the rhythm of English is based on stress, with syllables of the language being either strong or weak; strong syllables contain full vowels, while weak syllables contain reduced vowels, usually schwa /ə/. The stressed syllables occur at regular intervals in order to maintain a regular beat. The word 'beat', according to Brown (1990), refers to the stressed syllables; therefore, stressed syllables or words always take up an entire beat, while unstressed syllables or

words occur between the beats. The English rhythm can be illustrated by the following sentences (from Avery & Ehrlich, 1992, p. 74).

	BIRDS	EAT	WORMS.
The	BIRDS	EAT	WORMS.
The	BIRDS	EAT	the WORMS
The	BIRDS	ill EAT	the WORMS.
The	BIRDS	will have EATen	the WORMS.

The three words in capitals, *birds, eat* and *worms* are important to the meaning of the sentence; therefore, they are stressed and take up an entire beat, and the remaining words, *the, will*, and *have,* do not change or add meaning to the sentence, so they are unstressed and placed between the beats. This pattern is characteristic of stress-timed languages.

In stress-timed languages, such as English and Arabic, the number of stressed syllables determines the time required to pronounce an utterance. Stressed syllables occur at regular intervals, while unstressed syllables are compressed or "squeezed" between the stressed ones. These unstressed syllables "become shorter and lose some purity of the vowel sound" (Kelly, 2000, p. 71), as described by various researchers: they are "accommodated" (Celce-Murcia et al., 1998), "sandwiched together" (Avery & Ehrlich, 1992), or "squashed" (Kenworthy, 1987).

For example, in the sentence **"**Birds eat worms**"**, the lexical words—birds, eat, and worms—are stressed, taking up entire beats. Meanwhile, function words such as the**,** will**,** and have are unstressed and placed between the beats. This creates a rhythm where stressed syllables maintain their full vowel sounds, while unstressed syllables are reduced to schwa /ə/. Even when sentences differ in length, such as "The birds will have eaten worms", the rhythm remains stress-timed because unstressed syllables are compressed, preserving the regular timing of stressed syllables.

Arabic follows the same principle. In the sentence **"**الأسد يركض بسرعة**"** *(*al-ʔasad yarkuḍu bisurʿah*),* meaning "The lion runs quickly," the stressed syllables (/ʔa/, /yar/, and /su/) are pronounced with greater prominence and length. In contrast, the unstressed

syllables (/l/, /sad/, /kuḍ/, and /rah/) are shorter and less emphasized, preserving the rhythmic pattern characteristic of stress-timed languages.

Conversely, syllable-timed languages, such as French and Spanish, rely on the total number of syllables rather than the number of stresses to determine the duration of an utterance. Each syllable is produced with approximately the same duration and importance, regardless of its function within a sentence (Kreidler, 2002).

For instance, in French, each syllable receives equal emphasis and timing. In the sentence "Les enfants jouent au ballon" (The children are playing with a ball*)*, each syllable—/le/, /zɑ̃/, /fɑ̃/, /ʒu/, /o/, /ba/, /lɔ̃/—is pronounced with nearly equal timing and emphasis. This creates a balanced rhythm, where no syllable is noticeably lengthened or compressed, resulting in the characteristic rhythmic pattern of syllable-timed languages.

In English, sentences with equally stressed words, such as "Birds eat worms"**,** create a staccato or syllable-timed rhythm, where each word sounds equally prominent. However, this rhythm is unnatural for English, as most utterances contain a mix of lexical and function words. Lexical words typically have stressed syllables, while function words and unstressed syllables are reduced. For example, in the sentence "The birds will have eaten worms," the function words the**,** will**,** have, and the unstressed syllable **-**en in eaten are reduced. This loss of staccato rhythm reflects the natural stress-timed pattern of English, where stressed syllables dominate and unstressed syllables are compressed.

The importance of alternating between stressed and unstressed syllables to help keep the English rhythm is well described by Levis (2018) who states that unstressed syllables and words are the background against which stressed syllables are more prominent. They are harder to hear, are orthographically less explicit, and are the places where connected speech modifications such as deletions, additions, and sound modifications are more likely to occur and they help configure the rhythmic structure of the spoken phrase.

Accordingly, it is not only the reduced forms of function words which help maintain the characteristic rhythm of English but also the connected speech processes such as assimilation, elision and linking, as pointed out by Skandera and Burleigh (2005, p. 89):

> The fact that, in stress-timed languages like English, several syllables may have to be fitted into a relatively short time span [which] requires various means of making the pronunciation easier (and thus faster). Among them are not only the processes of reduction and elision, but also a process [...] called assimilation.

Thus, in stress-timed languages like English, the rhythm is organized around emphasizing stressed syllables while making unstressed syllables shorter. This can be challenging when speakers need to pronounce several syllables within a short amount of time. In order to facilitate faster pronunciation and make it easier for speakers, various phonological processes are employed. These processes include reduction, elision, and assimilation.

On this point, Crystal (2008, p. 40) states "when passages of natural conversation came to be analysed, however, assimilation emerged as being one of the main means whereby fluency and rhythm are maintained." Jenkins (2000, p. 149) also agrees that it is the "stressed-timed rhythm of English which causes speakers to employ the features of connected speech." According to Celce-Murcia et al. (1996), adjustments in connected speech such as assimilation, linking, deletion and reduction reflect native speakers' attempts to connect words and syllables smoothly in natural speech; all these phonological processes work to preserve stress-timed rhythm.

In the following example 'When do you want to go?' (Walker 2015, p. 42) /wen du: ju: wɒnt tu: gəʊ/, some phonological features may occur. First, the full vowels of the function words: 'do', 'you', 'to' are reduced to schwa; the utterance therefore is pronounced [wen də jə wɒnt tə gəʊ]. Second, the reduction of vowels is accompanied by processes such as elision and assimilation or coalescence. In natural speech, the utterance will be more likely pronounced [wen ʤə wɒ nə gəʊ]. The schwa is elided in 'do' and 'you' and the sounds /d/ and /t/ coalesce into one single sound [ʤ]. The same is true for 'want to', where the /t/ is elided in both words, to become [wɒnə]. Walker (2015) concludes that these changes rarely cause problems for native speaker listeners or for bilingual listeners, however, for many English as a Lingua Franca (ELF) interlocutors it is not the case.

As mentioned previously, English stress-timed rhythm is characterised by the fact that strong syllables of the content words are stressed, and other syllables, mainly function

words and the unstressed syllables of content words, remain weak and reduced. In addition to reduction, other phonological processes, such as assimilation, elision and linking occur to help maintain rhythm; otherwise, it will be very difficult to maintain the characteristic rhythm of English (Sethi & Dhamija 1999).

Even though it has been claimed that languages may be either stress-timed or syllable-timed, the distinction between the two types of rhythm has never been proved. According to Jenkins (2000), the concept of stress-timing appears to have little basis in reality, and those who attempt to hold a stress-timed conversation will find it impossible to maintain such a rhythm for more than a few seconds while focusing on the content of what they are saying. More importantly, many researchers think that there is unclear distinction between stress-timed rhythm and syllable-timed rhythm, such as Roach (Roach 1991, p. 123) who puts it as follows:

> It must be pointed out, however, that the evidence for the existence of stress-timed rhythm is not strong. There are many laboratory techniques for measuring time in speech, and measurement of the time intervals between stressed syllables in connected English speech has not shown the expected regularity; moreover, using the same measuring techniques on different languages, it has not been possible to show a real difference between 'stress-timed' and 'syllable-timed' languages.

However, the importance of rhythm to ESL and EFL learning is pointed out by many researchers. Corinne (1979) states that the rhythmic impulse is the primary phonological fact of language; it follows that command of rhythm is the key to mastery of the spoken language, and inadequate control of this feature, the ultimate barrier to fluency and comprehensibility. Similarly, Brown (1990, p. 43) points out that "rhythm in English is not just something extra, added to the basic sequence of consonants and vowels, it is the guide to the structure of information in the spoken message." This implies that the rhythm of English results from alternating stressed and unstressed syllables, and that the stressed syllables are more important in conveying meaning.

1.4 Connected Speech and Formality

Many ESL/EFL teachers feel reluctant to teach connected speech processes because they refer to them as "lazy, sloppy, careless, slack, slipshod, slovenly, substandard, low-class or low-status speech" (Brown & Kondo-Brown 2006, p. 5), a view that is shared by

many researchers (Celce-Murcia et al. 1996; Brown 1990; Weinstein 2001; Skandera & Burleigh 2005). Even EFL learners may be influenced by their teachers' attitudes and therefore do not give much importance to learn these processes (Brown, 1977).

For Skandera and Burleigh (2005), phonological processes, such as assimilation, elision and reduction, are not features of careless or perhaps even sloppy speech—that shows a lack of care, thought and effort—but typical features of any kind of spoken English. The degree and frequency of occurrence of these features, however, usually depend to a greater extent to factors such as speed or ease of pronunciation, communicative situation, and social class. In other words, the features are much more common in rapid speech, in informal situations, and in working-class accents than in slow speech, formal situations, and upper-class accents.

The view that connected speech processes are used only in informal speech is misleading and needs to be re-evaluated because they are actually used across all registers and styles of speech, including formal settings. These processes are not limited to casual or colloquial speech but are found in all types of spoken language. "Even the most formal pronunciation of a language will typically contain some aspects of these phenomena" (Brown & Kondo-Brown 2006, p. 5). Thus, teachers as well as learners should be aware of the importance of these features in understanding spoken English. In fact, Underwood (1989) (as cited in Gokgoz-Kurt & Holt 2018, p. 312) states that learners who are taught connected speech features are more advantaged sociolinguistically; and can determine native speakers' switch from formal to informal speech.

> In this vein, it does not seem reasonable to be too restrictive in making claims regarding the contexts in which connected speech is used, which means that depriving L2 learners from exploring the features of connected speech might not be the best choice to make in a language classroom. In fact, connected speech could potentially help L2 learners feel sociolinguistically more advantaged, and even when considered as a marker of informality, it might help learners determine any 'switching' between informal and formal use of language in spoken discourse.

Underwood emphasizes that connected speech is not limited to specific situations, highlighting the importance of allowing second language learners to explore these features. So, second language learners should not be prevented from learning these features. Learning connected speech not only benefits learners socially but also teaches

them when to switch between informal and formal language in conversations. Therefore, integrating connected speech into language instruction can enhance learners' linguistic abilities and proficiency in diverse types of conversations, making it a valuable component of language education.

Brown A. (2014) puts forward five arguments against the view that processes like assimilation and elision are symptoms of slovenly or careless speech, and even questions the existence of such processes. First, he emphasizes that connected speech processes of assimilation, linking, elision, and weak forms are natural processes making a succession of articulatory movements easy. Second, these processes are very common, and it is almost impossible to pronounce the phrase 'George the Sixth's throne' /ʤɔ:ʤ.ðə.sɪksθs.θrəʊn/ without making articulatory simplifications such as eliding some consonants /ð, s, k/. Thus, this phrase becomes [ʤɔ:**ʤ**ðəsɪk**sθ**rəʊn].

Third, the strongest historical evidence for connected speech processes is the fact that standard modern pronunciation of many words is the result of the modifications those words have undergone over the centuries. For instance the word 'shepherd' was originally a compound of 'sheep + herd' in which the sound /h/ of the second word was lost to become /ʃepəd/ in modern pronunciation.

Fourth, the results of connected speech processes are reflected in the changes of spellings which in turn reflect changes in pronunciation. In expressions such as 'rock 'n' roll' and 'fish 'n' chips', both the vowel /ə/ and the consonant /d/ of the word 'and' are elided; and the expression 'gotcha' is an informal version of 'got you'.

Fifth, connected speech processes occur despite the fact that occasionally they may lead to ambiguous pronunciations. For instance, the pronunciation /aɪ bɔrəʊd ə bʊk/ may represent 'I borrowed a book' or 'I borrowed her book' where the/h/ of 'her' has been elided; so, 'a' and 'her' are both pronounced /ə/. Also, the pronunciation /wɪ ni:d fæks tədeɪ/ may represent 'we need fax/facts today' where the /t/ of 'facts' is elided; of course, the intended meaning is usually clear from the context.

To sum up, all connected speech processes (assimilation, linking, elision, and reduction) are natural processes common in everyday speech, and are used in all registers and styles, even in the most formal situations; otherwise, speech would sound unnatural.

1.5 Describing Connected Speech Processes

Two issues arise when dealing with connected speech processes: differences in terminology and the scarcity of relevant research (Levis & Alameen 2014). Indeed, researchers and textbook designers use not only different terms to describe connected speech processes (such as sandhi variations, reduced forms, absorption) but also use a wide variety of classifications of these processes, such as "contractions, blends (coalescent assimilation or palatalisation), reductions (unstressed words or syllables), linking, assimilation (progressive and regressive), dissimilation, deletion (syncope, apocope, aphesis), epenthesis flapping, disappearing /t/, *gonna/ wanna* type changes" (Levis & Alameen 2014, p. 5). Because of this variety of terms, Levis and Alameen (2014) state that there is a need for clarity in terminology and in classification; so they suggest that connected speech processes be classified into six main categories: linking, deletion, insertion, modification, reduction and multiple connected speech processes. However, in almost all pronunciation textbooks these processes are generally grouped under four main headings: assimilation (or modification), linking (including insertion), elision (or deletion) and reduction (i.e. the weakening of function words). The next section examines these processes in detail.

1.5.1 Assimilation

In natural connected English speech, it is very common that two sounds assimilate and become more similar to each other. According to Ogden (2009), it is easier to produce two consonants in sequence if they share some phonetic characteristics ─ such as place and manner of articulation, voicing, etc. ─ than to pronounce a sequence of consonants that differ significantly. Thus, if two consonants at word boundary differ in one or more features, one affects another to become identical by taking at least one of its phonetic features. This process is called assimilation, a Latin word meaning 'making one thing like another'.

Crystal (2008) defines assimilation as a general term in phonetics which refers to the influence exercised by one sound segment upon the articulation of another, so that the sounds become more alike, or identical.

For Skandera and Burleigh (2005), assimilation is a process whereby one sound, usually a consonant, becomes more like, or identical with a neighbouring sound regarding one or more of the distinctive features. More specifically, the articulation of one sound is influenced by the articulation of a neighbouring sound in that a speech organ either prolongs a distinctive feature of a preceding sound or anticipates a distinctive feature of a following sound.

Crystal (2008) states that if speech is articulated one word at a time, with pauses that correspond to the spaces in written language, there is little chance that the assimilations (or assimilatory processes) and other features of connected speech will be noticed. Roach (1991) also claims that the difference caused by assimilation is sometimes very noticeable, and sometimes very slight. When it is highly noticeable, it may make words less intelligible.

1.5.1.1 Types of Assimilation

The most exhaustive classification of assimilatory processes occurring in natural connected speech is reviewed by Pavlik (2009). He provides a complex typology of assimilation based on seventeen different analytic perspectives with almost sixty different assimilation types. However, and for practical teaching purposes, only few types of assimilation occurring in English, not exceeding four, are presented by many well-known authors.

Gimson (1968), Roach (1991), Kelly (2000), Collins and Mees (2013) describe the two most common types of assimilation dealing with direction of influence and types of influence. Skandera and Burleigh (2005), Cambell and Mixco (2007), and Crystal (2008) mention two other types based on the distance between the two assimilated sounds and the degree to which one sound assimilates to another. Assimilatory processes are often classified in terms of dichotomies: contiguous-non-contiguous, total-partial, and regressive-progressive. Since these categorisations are not hierarchically related, they are ordered from the least to the most commonly defined assimilatory processes. Figure 1.7 below presents the most common types of assimilatory processes.

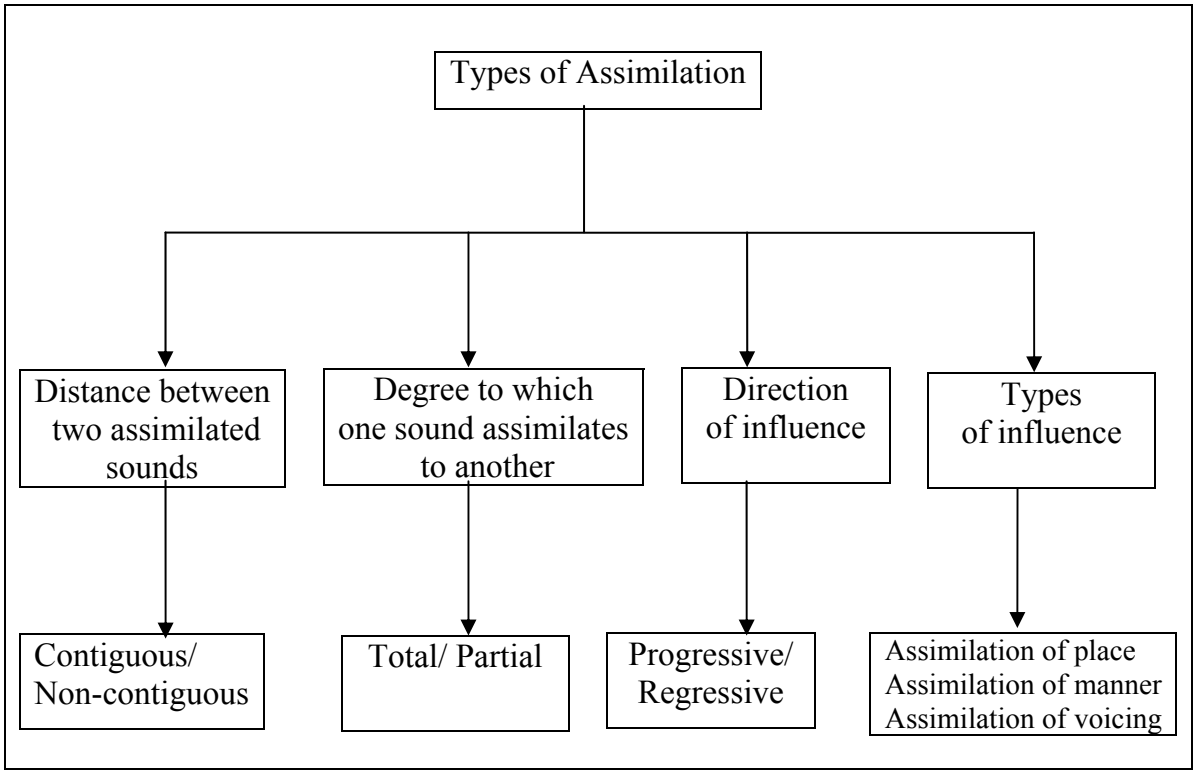
a. Distance Between Two Assimilated Sounds

This classification of assimilation is presented in terms of whether the sound being influenced is the result of an adjacent sound or a distant sound. Two types can be distinguished: contiguous assimilation and non-contiguous assimilation.

- **Contiguous assimilation**, **or contact assimilation:** the sound causing assimilation is immediately next to the affected sound, that is to say, the two assimilated sounds are side by side. This is illustrated in the example 'bad game' [bæ**g**geɪm], in which the /d/ is influenced by the adjacent consonant /g/ to become [g].

Figure 1.7

Types of Assimilation



- **Non-contiguous assimilation** also called **distance assimilation**: the sound causing assimilation is further away from the affected sound, that is to say, the two assimilated sounds are more distant. Distance assimilation is not common in English, it may occur in the idiom 'turn up trumps' [tə:**m**əptrʌmps] (Crystal 2008, p. 40), where the sound /n/ of 'turn' may be articulated as /m/ under the influence /p/ of 'up', even though there is a schwa /ə/ between /n/ and /p/.

b. Degree to which one sound assimilates to another

The main concern in this classification is whether the assimilated sound takes all the phonetic characteristics of the sound that causes assimilation. Two types are distinguished: partial assimilation and total assimilation.

- **Partial assimilation:** Assimilation is said to be partial if the assimilated sound retains at least one of its original phonetic features and takes one or two phonetic features of the sound causing assimilation. In the phrase 'ten bikes' [te**m**baɪks], for instance, the alveolar nasal sound /n/ becomes the bilabial nasal /m/ under the influence of the following bilabial sound /b/, adopting therefore its bilabiality.
- **Total assimilation**: Assimilation is said to be total if the assimilated sound takes on all the phonetic features of the adjacent sound. The assimilation is total in 'ten mice' [te**m**maɪs], where the /n/ sound becomes identical to the /m/ sound.

c. Direction of Influence

The main concern in this classification is whether the adjustment resulted from assimilation moves from left to right, or forwards; or from right to left, or backwards. The diagram below is a representation of assimilation at word boundary taken from Roach (1991, p. 124), where C^f represents the final consonant of the first word, and C^i represents the initial consonant of the second word. Accordingly, three types are recognised: progressive assimilation, regressive assimilation, and coalescent assimilation.

.....C^f | C^i.....
Word boundary

- **Progressive assimilation**: also called **perseverative assimilation**, is an assimilation in which the initial consonant C^i of the second word is affected by the final consonant of the first word C^f. The assimilation is said to be progressive when the initial consonant C^i takes on one or more features of the preceding consonant; therefore, this process has a forward effect: C^f influences C^i.

Table 1.3

Examples of Progressive Assimilation

Examples	Careful speech	Rapid speech
The cat has gone	/ðə kæt hæz gɒn/	[ðəkæ**ts**gɒn]
In the	/ɪn ðə/	[ɪ**nn**ə]

Note. Examples in Table 1.3 are adapted from *English Phonetics and Phonology* (p. 45), by P. Roach, 1991, and *Gimson's Pronunciation of English* (p. 112), by A. Cruttenden, 2014.

Table 1.3 provides two cases of progressive assimilation─the first is an example of voicing and the second is an example of manner─where the final consonant of the first word has an effect on the next sound of the second word. In the first example 'cat has', the voiceless consonant /t/ influences the voiced consonant /z/ of 'has' to become voiceless **[s]**. In the second example 'in the', the nasal /n/ effects the following sound /ð/ to become **[n]**.

- **Regressive assimilation:** also called **anticipatory assimilation**, is an assimilation in which the final phoneme of the first word is modified and influenced by the initial phoneme of the second word. If the assimilation is said to be regressive, when the final consonant C^f takes one or more features of the following consonant C^i, so this process has a backwards effect: C^i influences C^f.

Table 1.4

Examples of Regressive Assimilation

Examples	Careful speech	Rapid speech
Light blue	/laɪt bluː/	[laɪ**pb**luː]
Bright colour	/braɪt kʌlə/	[braɪ**kk**ʌlə]

Note. Examples in Table 1.4 are adapted from *English Phonetics and Phonology* (p. 124), by P. Roach, 1991.

In the two examples above, the alveolar /t/ is followed by a bilabial consonant /b/ 'light blue', and a velar consonant /k/ 'bright colour'; so there is a backward effect on the

consonant /t/ which becomes [**p**] before /b/, and [**k**] before /k/. In English regressive assimilation is more common than progressive assimilation.

- **Coalescent assimilation,** also called **reciprocal assimilation**, occurs when two adjacent sounds reciprocally influence one another's pronunciation (O'Grady 2013). This type of assimilatory process differs from all the assimilatory processes described previously, where the influence of a phoneme is on the preceding or the following phoneme. However, in coalescent assimilation, two consonants merge together to form "a single, new sound, or rather phoneme" (Skandera & Burleigh 2005, p. 91), thus creating a new sound. The most common example of coalescent assimilation is the palatalisation that occurs with alveolar consonants /s/, /z/, /t/, /d/ when followed by /j/, a process that Bowen (1975, p158) describes as follows:

> One of the clearest examples of reciprocal assimilation, where sounds and sequence affect each other, both changing, [it] is a pattern generally referred to as palatalization. In palatal assimilations an alveolar fricative or stop sound, specifically /s/, /z/, /t/, /d/, is followed directly by a palatal semi-consonant, the onglide /j/.

Palatalisation refers to any sound change that makes a sound more palatal (Cambell & Mixco 2007). This term is commonly used to describe a shift in articulation from a primary to a secondary place of articulation (Crystal 2008). Palatalisation occurs, for instance, when the sounds /t/ and /d/ whose primary place of articulation is alveolar become palatalised **[ʧ]** and **[ʤ]**. Similarly, the alveolar fricatives /s/ and /z/ become **[ʃ]** and **[ʒ]** when followed by the palatal sound /j/. In these cases, the sounds are produced further back in the mouth, closer to the hard palate, where the semi-vowel /j/ is articulated, resulting in a secondary place of articulation.

Table 1.5

Examples of Palatalisation at Word Boundaries

Consonant change			**Examples**
/d/	+ /j /	[dʒ]	Would you mind moving? [wʊ**dʒ**ə]
/t/		[tʃ]	Is that your dog? [ðæ**tʃ**ə]
/s/		[ʃ]	He's coming this year. [ðɪ**ʃʃ**ɪə]
/z/		[ʒ]	Does your mother know? [dʌ**ʒ**ə]
/ts /		[tʃ]	She lets your dog in. [le**tʃ**ə]
/dz /		[dʒ]	She needs your help. [ni:**dʒ**ə]

Note. Examples in Table 1.5 are adapted from *Teaching Pronunciation A Course Book and Reference Guide* (p. 162), by M. Celce-Murcia, D. M. Brinton, & J. M. Goodwin, 2010.

1.5.1.2 Types of Influence

There are three types of influence to describe assimilation: assimilation of place, of manner, and of voicing.

- **Assimilation of place:** Place assimilation occurs when the place of articulation of a consonant affects the place of articulation of a neighbouring consonant (Dirven & Verspoor, 2004). This type mostly occurs when a word ends with an alveolar consonant followed by a word whose initial consonant is not an alveolar. Alveolar consonants are highly susceptible to regressive assimilation. Examples of assimilation of place, as shown in Table 1.6, are taken from Gimson (1968, p. 295) (the arrow symbol means "becomes").

As it is shown in Table 1.6 below, the consonant /t/ becomes **[p]** in front of /p, b, m/, or becomes **[k]** in front of /k, g/; the consonant /d/ becomes **[b]** in front of /p, b, m/, or becomes **[g]** in front of /k, g/; and the consonant /n/ becomes **[m]** in front of /p, b, m/, or

becomes **[ŋ]** in front of /k, g/. The assimilation of place is the most common type compared to assimilation of manner and voicing.

Table 1.6

Examples of Assimilation of Place

Assimilatory Modifications	**Examples**	**Careful speech**	**Rapid speech**
/t/→[p] before /p, b, m/	-that pen	/ðæt pen/	[ðæ**pp**en]
	-that boy	/ðæt bɔɪ/	[ðæ**pb**ɔɪ]
	-that man	/ðæt mæn/	[ðæ**pm**æn]
/t/→[k] before /p, b, m/	-that cup	/ðæt kʌp/	[ðæ**kk**ʌp]
	-that girl	/ðæt gə:l/	[ðæ**kg**ə:l]
/d/→[b] before /p, b, m/	-good pen	/gʊd pen/	[gʊ**bp**en]
	-good boy	/gʊd bɔɪ/	[gʊ**bb**ɔɪ]
	-good man	/gʊd mæn/	[gʊ**bm**æng]
/d/→[g] before /p, b, m/	-good concert	/gʊd kɒnsət/	[gʊ**gk**ɒnsət]
	-good girl	/gʊd gə:l/	[gʊ**gg**ə:l]
/n/→[m] before /p, b, m/	-ten players	/ten pleɪəz/	[te**mp**leɪəz]
	-ten boys	/ten bɔɪz/	[te**mb**ɔɪz]
	-ten men	/ten men/	[te**mm**en]
/n/→[ŋ] before /p, b, m/	-ten cups	/ten kʌps/	[te**ŋk**ʌps]
	-ten girls	/ten gə:lz/	[te**ŋg**ə:l]

Note. Examples in Table 1.16 are adapted from *An Introduction to the Pronunciation of English* (p. 295), by A. C. Gimson, 1968.

- **Assimilation of manner:** According to Roach (1991), assimilation of manner is much less noticeable, and is mostly found in rapid and casual speech, in which the change in manner is towards a consonant that makes less obstruction to the airflow. This type occurs when a plosive consonant is in front of a fricative or nasal; the plosive sound becomes therefore a fricative or nasal. So, the consonant /t/ becomes **[s]** in front of the fricative /s/;

and the consonant /d/ becomes **[n]** in front of the nasal /n/, as it is shown in Table 1.7 below. Assimilation of manner is generally concerned with regressive assimilation of alveolar consonants. However, in one particular case, progressive assimilation of manner is found: when a word ends with a plosive or nasal and the following word starts with the consonant /ð/, this latter becomes identical in manner to the preceding consonant, as in the example 'in the'. The examples taken from Roach (1991, p. 125).

Table 1.7

Examples of Assimilation of Manner

Assimilation	**Examples**	**Careful speech**	**Rapid speech**
Regressive	That side	/ðæt saɪd/	[ðæ**ss**aɪd]
	Good night	/gʊd naɪt/	[gʊ**nn**aɪt]
Progressive	In the	/ɪn ðə/	[ɪ**nn**ə]

Note. The examples in Table 1.7 are adapted from *English Phonetics and Phonology* (p. 125), by P. Roach, 1991.

- **Assimilation of voicing:** Assimilation of voicing is found in a limited way; and only regressive assimilation of voicing is found across word boundaries (Roach 1991). This type occurs when a word ends with a voiced fricative and the following word starts with a voiceless consonant. Then, the voiced fricative /ð/ may be realized as a voiceless fricative/θ/. The consonant /ð/ of 'with' becomes **[θ]** in front of /θ/ of 'thanks; the consonant /z/ of 'was' becomes **[s]**/ in front of /s/ of 'sent'; and the consonant /v/ becomes **[f]** in front of /f/ of 'found'.

Table 1.8

Examples of Assimilation of Voicing

Examples	**Modifications**	**Careful speech**	**Rapid speech**
Wi<u>th th</u>anks	ð→**[θ]**	/wɪð θæŋks/	[wɪ**θθ**æŋks]
He wa<u>s s</u>ent	z→**[s]**	/wɒz sent/	[wə**ss**ent]
We'<u>ve f</u>ound it	v→**[f]**	/wɪ hæv faʊnd/	[wɪ**ff**aʊnd]

Note. Examples in Table 1.8 are adapted from *Gimson's Pronunciation of English* (p. 310), by A. Cruttenden, 2014.

1.5.2 Linking

Linking, also known as liaison is the connection of the final sound (vowel or consonant) of one word to the initial sound of the next word. The ability to speak English smoothly, to pronounce words that are appropriately connected entails the use of linking (Celce-Murcia et al. 1996). In fact, native speakers link words together if the words are part of the same thought group in order to create smooth, uninterrupted sounds that are the key to natural, fluent sounding speech (Mojsin 2009). Accordingly, there is no pause between two words; they are linked together so that they sound like one word.

Skandera & Burleigh (2005) provide broad and narrow definitions of liaison or linking. A broad definition considers liaison merely as a transition between words in connected speech, particularly when this involves an unusual phonetic feature. A well-known example is 'not at all' **[**nɒtətɔːl**]**, where the last consonant /t/ of the unstressed word 'at' is linked to the beginning of strongly stressed word 'all'.

A narrow definition considers liaison as a process whereby a word that ends in a vowel when pronounced in isolation acquires a final consonant when followed by a word beginning with a vowel. Some words end with consonants that are unarticulated, and are only articulated when preceded by a vowel in the same word, and followed by words beginning with vowels. This type of liaison is a common feature of French, and, in fact, the term is sometimes restricted to the description of that language. For example, the final consonants in the French words 'les' and 'est', are articulated only when followed by a vowel, as in 'les amis' and 'c'est une maison'. Then, the final consonants of 'les' and 'est', are not produced when these words are pronounced in isolation but articulated in certain phonetic environments in connected speech for ease of pronunciation. In English, the best-known case of liaison is the 'linking r', which will be discussed below, together with other rules of linking.

Below are rules for linking: linking consonant to vowel, linking consonant to consonant, linking identical consonants, and linking vowel to vowel.

a. Linking Consonant to Vowel

When a word ends with a consonant and the next word begins with a vowel, this consonant becomes attached to the following word. The technical name of this type of

linking is ‘resyllabification’, a phonological process whereby a final consonant of one word becomes part of the following word which begins with a vowel. In the sequence ‘green eye’ **[**gri:**.**nai**]**, the full stop is used to signify the end of the first syllable and the beginning of the next one, where the consonant /n/ is originally the coda (i.e. the consonant final position) of the first word ‘green’ becomes the onset (i.e. the consonant initial position) of the second word ‘eye’ (Carr, 2008; Gut, 2009).

Table 1.9

Examples about Linking Consonant with Vowel

Examples	**Careful speech**	**Rapid speech**
Leave early	/li:v ə:lɪ/	[li:**.**v**ə**:**.**lɪ]
Breathe it	/bri:ð ɪt/	[bri:**.ð**ɪt]
Drag out	/dræg aʊt/	[dræ**.ga**ʊt]

Note. Examples in Table 1.9 are adapted from *Teaching American English Pronunciation* (p. 85), by P. Avery & S. Ehrlich, 1992.

b. Linking Consonant to Consonant

When a word that ends with a plosive consonant is followed by a word that begins with a plosive or an affricate /ʧ, ʤ/, the plosive consonant is usually not released. Plosives are characterized by a brief burst after their release, but when preceded by another plosive or affricate, their release becomes inaudible, although the tongue or lips move to the place of articulation of the plosive consonant and then move immediately to the place of articulation for the next consonant. To show this in transcription, a raised little angle [˺] is used to indicate that the plosive consonant is unreleased.

Table 1.10

Examples about Unreleased Plosive Consonants

Examples	Careful speech	Rapid speech
Lap dog	/læp dɒg/	[læ**p̚d**ɒg]
Bad judge	/bæd ʤʌʤ/	[bæ**d̚ʤ**ʌʤ]
Fat chance	/fæt ʧæns/	[fæ**t̚ʧ**æns]

Note. Examples in Table 1.10 are adapted from *Teaching American English Pronunciation* (p. 85), by P. Avery & S. Ehrlich, 1992.

c. Linking Identical Consonants

When a consonant that ends one word is identical to the consonant that begins the next word, the two consonants are usually pronounced as one long consonant. Gemination is the technical term used for this phenomenon. In a phonetic transcription, it is represented with the length mark [:]; the same phonetic symbol meaning 'long sound' is used to represent lengthened vowels.

Table 1.11

Examples of Liking Identical Consonants

Examples	Careful speech	Rapid speech
Ripe plum	/raɪp plʌm/	[raɪ**.p:**lʌm]
Ice skating	/aɪs skeɪtɪŋ/	[aɪ**.s:**keɪ**.**tɪŋ]
Fall leaves	/fɔ:l li:vs/	[fɔ:.**l:**i:vs]

Note. Examples in Table 1.11 are adapted from *Teaching American English Pronunciation* (p. 85), by P. Avery & S. Ehrlich, 1992.

d. Linking Vowel to Vowel

When two vowel sounds meet at word boundary, there is a possibility to drop one of them. However, this would theoretically be sounded impossible because the words would be distorted beyond recognition. Eliding adjacent vowels does not seem to work for English. In fact, what English speakers do in such cases is the opposite of elision; they

insert an extra sound to mark the transition between two vowels (Dalton & Seidlhofer, 1994). Thus, when two vowel sounds meet, speakers often link them in four ways, as shown in Tables 1.12, 1.13, 1.14, and 1.15 below.

- **Linking /r/**

Some English accents, such as General American (G.A.), Irish English, and Scottish English, are considered rhotic. This means that when the letter /r/ appears in a word final position or preceding a consonant, it is pronounced, as in 'car' /kɑ:r/, four /fɔ:r/, here' /hɪər/ and 'card' /kɑ:rd/; whereas, in non-rhotic accents such as Received Pronunciation (R.P.) or BBC English, it is not pronounced. However, when these words are followed by other words which start with a vowel sound, the phoneme /r/ is pronounced. In transcription, the symbol representing linking /r/ usually appears in normal size which is not the case of other linking sounds.

Table 1.12

Examples about Linking /r/

Examples	**Careful speech**	**Rapid speech**
Here are	/hɪə ɑ:/	[hɪə**r**ə]
Four eggs	/fɔ: egz/	[fɔ:**r**egz]
The car is	/ðə kɑ: ɪz/	[ðəkɑ:**r**ɪz]

Note. Examples in Table 1.12 are adapted from *English Phonetics and Phonology* (p. 128), by P. Roach, 1991.

- **Intrusive /r/**

Many speakers with non-rhotic accents will pronounce the phoneme /r/ when two vowels sounds meet at word boundary, even when the letter 'r' does not appear in the spelling in order to ease the transition. That is why it is called intrusive /r/. This occurs when a word ending in /ə/, /ɑ:/ or /ɔ:/ is followed by a word beginning with a vowel, as shown in Table 1.13. Intrusive /r/ is still regarded as incorrect or sub-standard pronunciation by some English speakers and teachers, but it is undoubtedly widespread (Roach 1991).

Table 1.13

Examples about Intrusive /r/

Examples	Careful speech	Rapid speech
Australia all out	/ɒstreɪlɪə ɔ:l aʊt/	[ɒstreɪlɪəʳɔ:laʊt]
Media event	/mi:dɪə event/	[mi:dIəʳevent]
I saw it	/ aɪ sɔ: ɪt/	[aɪ sɔ:ʳɪt]

Note. Examples in Table 1.13 are adapted from *English Phonetics and Phonology* (p. 128), by P. Roach, 1991.

- **Intrusive /j/**

When a word ends in /ɪ/, /i:/, /eɪ/, /aɪ/, or /ɔɪ/ and the next word begins with a vowel, a linking glide, represented by the phonetic symbol [ʲ], is inserted. According to Kelly (2000, p. 111), "This happens [the intrusive [ʲ]] because in order to form /i:/ and /ɪ/, the mouth is in more or less the same position as it is for the start of the semi-vowel /j/."

Table 1.14

Examples about Linking /j/

Examples	Careful speech	Rapid speech
I ate out	/aɪ eɪt aʊt/	[arʲeɪtaʊt]
Lay it	/leɪ ɪt/	[lerʲɪt]
Be on time	/bɪ ɒn taɪm/	[brʲɒntaɪm]

Note. Examples in Table 1.14 are adapted from *Teaching American English Pronunciation* (p. 86), by P. Avery and S. Ehrlich, 1992, and *Mastering the American Accent* (p. 104), by L. Mojsin, 2009.

- **Intrusive /w/**

Similarly, when a word ends in /ʊ/, /u: /, /əʊ/, and /aʊ/, and the following word begins with a vowel, there is a linking glide represented by the phonetic symbol [ʷ]. Because the mouth is at almost the same place for the beginning of the semi-vowel /w/ as it is for the formation of /ʊ/ and /u:/, the intrusive [ʷ] occurs.

Table 1.15

Examples of Linking /w/

Examples	Careful speech	Rapid speech
Flew in	/flu: ɪn/	[flu:ʷɪn]
Grow up	/grəʊ ʌp/	[grəʊʷʌp]
Blow out	/bləʊ aʊt/	[bləʊʷaʊt]

Note. Examples in Table 1.15 are adapted from *Teaching American English Pronunciation* (p. 86), by P. Avery and S. Ehrlich, 1992.

1.5.3 Elision

Elision, also known as deletion, ellipsis, omission, is another connected speech process whereby a sound is not pronounced even though it appears in the spelling, i.e. "deletion occurs without any acknowledgment in the [English] spelling system" (Celce-Murcia et al. 1996, p. 163). For Dalton and Seidlhofer (1994, p. 29), elision is when "a consonant or a vowel which would exist in a careful pronounced version of the word or phrase is left out."

Crystal (2008, p. 166) defines elision as:

> A term used in phonetics and phonology to refer to the omission of sounds in connected speech. Both consonants and vowels may be affected, and sometimes whole syllables may be elided. Unstressed grammatical words, such as *and* and *of*, are particularly prone to be elided, as when the *f* is dropped in cup of tea (cf. *cuppa tea),* or the *a* and *d* are dropped in *boys 'n' girls*... Complex consonant clusters are also often reduced, e.g. *twelfths* becoming /twelθs/ or /twelfs/. Several intricate patterns of influence can be demonstrated. (Italics in original)

Thus, elision, which refers to leaving out sounds in connected speech, can happen with both consonants and vowels, and sometimes even whole syllables are omitted. Words that are not stressed, like "and" or "of," are often more likely to be left out. Elision also occurs with complicated consonant groups. There are many patterns and influences involved in the elision processes. For example, 'next week' is often pronounced as [nekswi:k] instead of /nekst wi:k/, where the /t/ sound in 'next' is elided because the /t/ and /w/ sounds form a complex consonant cluster that can be simplified in casual speech.

Another example is ‘old man,’ which is often pronounced as [əʊlmæn] instead of /əʊld mæn/, where the /d/ sound in ‘old’ is elided because the /d/ and /m/ sounds form a complex consonant cluster that can be simplified in casual speech. This elision makes the transition between words smoother and easier to articulate.

Like any other process of connected speech, elision is also meant to make the articulation easier. However, the elision of sounds is not random; as sounds are not dropped anywhere, and are not dropped always, otherwise, they would disappear from the language altogether (Lecumberri & Maidment 2002). This process involves applying some rules, among which the following is the most common.

The most commonly involved consonants in elision are the alveolar plosives /t/ and /d/, particularly when they occur at the end of a word and are followed by a consonant at the start of the next word. The rule is that when there is a sequence of three consonants, it is nearly always a /t/ or /d/ which ends up in the middle, and therefore elided. In this way, complex consonant clusters are simplified.

Table 1.16

Examples on Elision

Examples	**Careful speech**	**Rapid speech**
First light	/fəːst laɪt/	[fəː**sl**aɪt]
Old man	/əʊld mæn/	[əʊ**lm**æn]

Note. Examples in Table 1.16 are adapted from *An Introduction to the Pronunciation of English* (p. 298), by A. C. Gimson, 1968.

According to Lecumberri and Maidment (2000), the elision of these consonants occurs under certain conditions and environments.

a. The alveolar plosive must be in the coda (the final position) of the syllable, not in the onset (initial position).

b. It must be preceded by a consonant of the same voicing, i.e. the sound /t/ must be preceded by a voiceless consonant, and the sound /d/ must be preceded by a voiced consonant.

c. The following sound must be a consonant other than the voiceless /h/, otherwise the consonant /t/ would be pronounced, as in the example 'most horrible' [məʊs**th**ɒrəbl]

d. The elision of /t/ or /d/ in the past participle and the past form of regular verbs eliminates the phonetic cue of past tense, and the only way to compensate for the loss of the articulation of these sounds is made by the general context (Gimson 1968).

Table 1.17

Examples on the Elision of /t/ and /d/of the Past Form of Regular Verbs

Examples	**Careful speech**	**Rapid speech**
Mashed potatoes	/mæʃt pəteɪtəʊ/	[mæ**ʃp**əteɪtəʊ]
We stopped for	/wɪ stɒpt fə/	[wɪstɒ**pf**ə]
Rubbed gently	/rʌbd ʤentIɪ/	[rʌ**bdʒ**entIɪ]
I refused both	/aɪ rɪfju:zd bəʊθ/	[aɪrɪfju:**zb**əʊθ]

Note. Examples in Table 1.17 are adapted from *An Introduction to the Pronunciation of English* (p. 292), by A. C. Gimson, 1968.

e. In addition to /t/ and /d/ that many speakers elide, there are also some other consonants which are deleted quite frequently. These include /θ/ and /v/.

Table 1.18

Examples of Elision of /θ/ and /v/

Examples	**Careful speech**	**Rapid speech**
The sixth's throne	/ðə sɪksθs θrəʊn/	[ðə sɪksθ**r**əʊn]
Twelfth night	/twelfθ naɪt/	[twel**fn**aɪt]
Lots of them	/lɒts əv ðəm/	[lɒts**əð**əm]
Waste of money	/weɪst əv mʌnɪ/	[weɪst**əm**ʌnɪ]

Note. Examples in Table 1.18 are from *English Phonetics and Phonology* (p. 127), by P. Roach, 1991.

f. Among the sounds that may be elided in rapid speech, especially at word boundary is the vowel schwa /ə/. It is particularly elided when followed by a continuant─a sound

produced without a complete closure of the vocal tract, such as fricatives and approximants─and when it is preceded by a word final consonant.

Table 1.19

Examples on the Elision of the Vowel Schwa /ə/

Examples	**Careful speech**	**Rapid speech**
Not alone	/nɒt ələʊn/	[nɒ**tl**əʊn]
Run along	/rʌn əlɒŋ/	[rʌ**nl**ɒŋ]

Note. Examples in Table 1.19 are from *An Introduction to the Pronunciation of English* (p. 297), by A. C. Gimson, 1968.

To conclude, elision is a process which is extremely common in spoken English. It is a very clever way to save time and effort. The next section deals with the reduced forms of function words, which is a typical feature of connected speech in English.

1.5.4 Reduced Forms of Function Words

English words can be divided into two groups: content words and function words. According to Corver and Riemsdjik (2001), a central dichotomy in syntactic categorisation is between content words, also called lexical words, and function words, also referred to as grammatical words, form words, and structure words. Content words are words that express independent meaning such as nouns, main verbs, adjectives, adverbs, question words and demonstratives. These word classes are open and the number of words they contain is unlimited because new words are continually added (Skandera & Burleigh 2005). By contrast, function words are words that exist only to fit grammatical convention and do not change or add meaning to the sentence (Brookes 1994), such as determiners, prepositions, auxiliaries, pronouns, conjunctions and relative pronouns (see Table 1.20 below). These word classes are close, and the number of words is rarely or never added.

Table 1.20

Content Words and Function Words

Content Words	Function Words
Nouns	Determiners (e.g., a, an, the, some)
Main Verbs	Prepositions (e.g., at, to, of, from)
Adverbs	Auxiliaries (e.g., will, have, forms of the verb "be")
Adjectives	Pronouns (e.g., her, him, them, us, your)
Question Words	Conjunctions (e.g., and, but, or, as, that)
Demonstratives	Relative Pronouns (e.g., that, which)

The function of content and function words is nicely described by Brown A. (2014) who considers that producing a meaningful, grammatical sentence in English may be compared with building a wall, where both bricks and mortar are needed. The bricks are the basic building blocks, the substance. However, mortar is also needed in order to cement the bricks together. Moreover, the content words are the bricks of a sentence, conveying the most important information of the message, while the mortar of the function words is needed to join the content words together into a grammatical sentence, even though they themselves do not carry significant meaning.

Since content words convey the most important information of an utterance, they are therefore stressed and always take up an entire beat; while function words do not carry any meaning, they are usually unstressed and occur between the beats. However, in the following contexts described by Roach (1991) the strong forms of function words are used.

a. When function words occur at the end of the sentence. For example, the word 'of' has the weak form /ə/ in the following sentence: 'I'm fond *of* chips'; but when it comes at the end of the sentence, as in the following example, it has the strong form /ɒ/ 'Chips are what I'm fond *of*'.

b. When a weak-form word is being contrasted with another word, e.g. 'The letter's *from* him, not *to* him'.

c. When a weak-form word is given stress for the purpose of emphasis, e.g. 'You *must* give me money'.

d. When a weak-form word is 'cited' or 'quoted', e.g. 'You shouldn't put "*and*" at the end of a sentence'.

e. When auxiliaries are attached to *n't*, e.g. 'He *doesn't* want to come here'.

f. When two consecutive auxiliary verbs are not followed by a full verb, the first auxiliary has a strong form, as in 'I *would* [wʊd] have' as opposed to 'I *would* [wəd] have liked it',

g. In coordinations, as in 'He travels *to* [tuː] and *from* [frɒm] London a lot, as opposed to 'He travels *to* [tə] London and he travels *from* [frəm] London'.

Vowels can be described in terms of both quality and quantity. Vowel quality refers to the tongue position (front, centre and back or close and open) and the lip position (spread, neutral and rounded); while vowel quantity refers to the length of the vowel. As mentioned previously, function words have two different pronunciations: when they are produced with their full strong vowels they preserve their vowel quality; but when they are pronounced with their weak reduced vowels their vowel quality changes. Most function words carry the weak vowel schwa /ə/ when they are reduced; others carry the short vowels /ɪ/ or /ʊ/.

The following list provides the most common function words presented in their strong forms, followed by their reduced forms, as shown in Table 1.21 below.

Table 1.21

Function Words in their Strong and Weak Forms

Function words	Strong form	Weak forms
1-Determiners		
a	/eɪ/	[ə]
an	/ən/	[æn]
the	/ði:/	[ðə] or [ðI]
some	/sʌm/	[səm]
2-Conjunctions		
and	/ænd/	[ən]
as	/æz/	[əz]
but	/bʌt/	[bət]
than	/ðæn/	[ðən]
that	/ðæt/	[ðət]
3-Personal pronouns		
she	/ʃi:/	[ʃɪ]
he	/hi:/	[hɪ] or [ɪ]
we	/wi:/	[wɪ]
you	/ju:/	[jə]
her	/hə:/	[hə]or [ə]
him	/hɪm/	[ɪm]
his	/hi:z/	[ɪz]
them	/ðem/	[ðəm]
us	/ʌs/	[əs]
your	/jɔ:/	[jə]
4-Prepositions		
at	/æt/	[ət]
for	/fɔ:/	[fə]
from	/frɒm/	[frəm]
of	/ɒv/	[əv]
to	/tu:/	[tə]
5-Auxiliary verbs		
can	/kæn/	[kən], [kə]
could	/kʊd/	[kəd]
have	/hæv/	[əv]
has	/hæz/	[əz]
had	/hæd/	[əd]
shall	/ʃæl/	[ʃəl] or [ʃl]
should	/ʃʊd/	[ʃəd] or[ʃd]
must	/mʌst/	[məs]

would	/wʊd/	[wəd]
do	/duː/	[də], [dʊ], [d]
does	/dʌz/	[dəz], [z], [s]
am	/æm/	[əm] or [m]
are	/ɑː/	[ə]
was	/wɒz/	[wəz]
were	/wəː/	[wə]

Note. Function words in Table 1.21 are adapted from *An Introduction to the Pronunciation of English* (Gimson, 1968) and *Better English Pronunciation* (O'Connor, 1989).

- **Schwa /ə/**

The schwa sound, also called the neutral vowel, is the most frequently occurring sound in English. The term neutral refers to the position of the tongue with respect to front, back, open or close positions. When this sound is articulated, the centre of the tongue is raised between mid-open and mid-close position; the lips are also in neutral shape (see Figure 1.8 below). The vowel /ə/ never appears within a stressed syllable, it is by nature an unstressed sound. Words such as 'a, the, some, but, does, you, to, them, your, for, was, could, should, would, are, were, can, shall, than and that' all carry schwa when reduced.

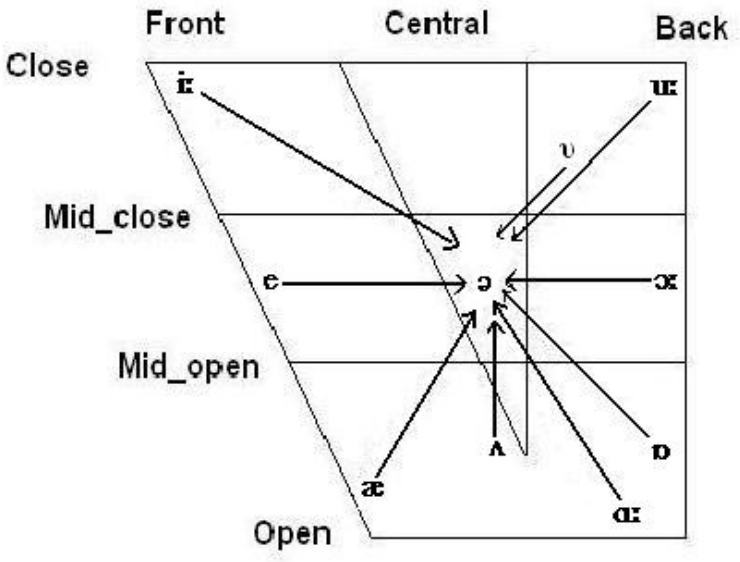
Many researchers insist on the importance of learning the vowel sound schwa perceptually and productively; and that ESL/EFL teachers are required to devote some attention to this vowel. For example, Kenworthy (1987, p. 51) points out to the importance of learning the vowel schwa as follows:

> There is one English sound that all learners must be made aware of at a very early stage–the neutral vowel used in unstressed syllables and weak forms–"the schwa" vowel. It should be among the first sounds that you draw the learners' attention whether through imitation, correction or perceptual work.

Kenworthy (1987) provides two good reasons for introducing the symbol schwa. First, because there is no letter that represents schwa in the alphabet and second, every vowel letter in English can represent schwa. She concludes that in order for learners to speak English with correct stress and rhythm and to pronounce words so that they can be identified by English listeners, schwa is essential.

Figure 1.8

Function Words Reduced to Schwa /ə/



- **Short Vowels / ɪ / and /ʊ/**

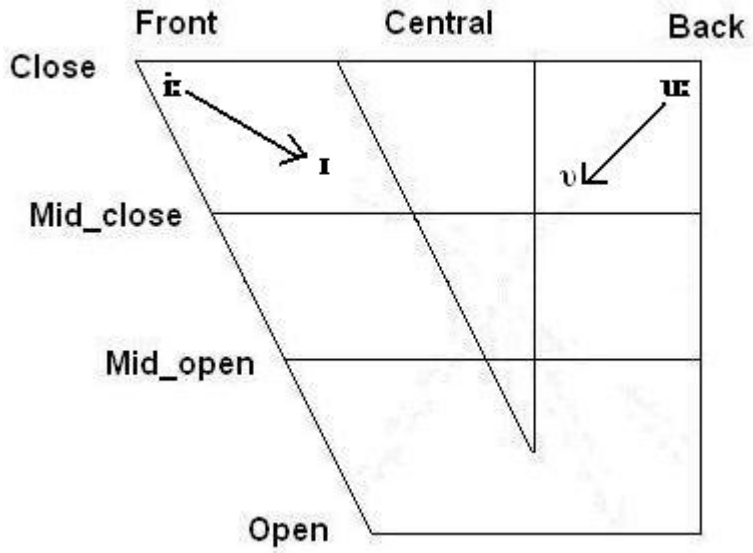
Some function words may also be reduced to the short vowels /ɪ/ or /ʊ/; but unlike the schwa, these two vowels may occur in stressed syllables as well.

When the vowel /ɪ/ is articulated, the part of the tongue between the front and centre is raised to just above mid-close position, and the lips are slightly spread (see Figure 1.9). The function words that carry the vowel /ɪ/ when reduced are 'the' (before vowel), 'he' (at the beginning of the sentence) and 'we'.

When the vowel /ʊ/ is articulated, the part of the tongue between the centre and the back is raised above mid-close position, and the lips are rounded (see Figure1.9 below). The function words which undergo vowel reduction to the short vowel /ʊ/ are '*you', 'to', 'do'* (when these words are before vowels). Figure 1.9 shows the way the short vowels /ɪ/ and /ʊ/ are weakened.

Figure 1.9

Function Words Reduced to /ɪ/ or /ʊ/



1.6 The Importance of Teaching Connected Speech Processes

The primary goal of teaching connected speech processes is to help students better understand spoken English. According to Kelly (2000, p. 113), "the simple awareness of their [connected speech processes] existence can help enormously in enabling students to better understand the language they hear." This suggests that even just being aware of the existence of connected speech processes can significantly benefit students in understanding the language they hear. By having this awareness, students can recognize and anticipate the changes that occur in spoken language, enabling them to comprehend the meaning more effectively. It implies that simply knowing about connected speech processes can have a positive impact on students' listening skills and their ability to understand spoken language more accurately.

As a matter of fact, teaching connected speech processes to EFL students may be beneficial in many ways. The six benefits cited by Brown (2023) and mentioned below are sufficient enough to encourage the inclusion of connected speech processes in EFL context.

i. Connected speech is a crucial aspect of the English language. Learning and understanding connected speech is essential for effective communication and comprehension in real-life situations. Students need exposure to authentic spoken English and specific instruction on connected speech patterns, such as linking, assimilation, and reductions. Additionally, connected speech is often considered as one of the suprasegmental features of language, which includes elements like stress, intonation, and rhythm.

ii. Traditionally, language teaching has focused heavily on grammar rules and vocabulary. However, in order to communicate effectively, students also need a good understanding of pronunciation, including connected speech. Being aware of these elements is essential for students to comprehend and produce natural, fluent speech. Therefore, it is important for learners to receive adequate instruction and practice in all aspects of pronunciation, including connected speech. By expanding their knowledge and skills in grammar, vocabulary, and pronunciation, learners will have a complete understanding of the language and be better equipped to communicate effectively.

iii. Connected speech is commonly used in everyday conversations regardless of the level of formality. However, the way it is employed might vary depending on the level of formality. Generally, connected speech is a fundamental aspect of spoken language and is found across all levels of formality. However, its implementation may adapt to suit the desired level of formality in a particular context.

iv. Understanding connected speech is crucial for non-native learners as it allows them to comprehend native speakers and produce clear and natural-sounding spoken English. By recognizing how sounds blend together, syllables are linked, and stress is placed on certain words, learners can enhance their listening and speaking skills, leading to better communication in real-life situations.

v. In situations where language learners need to communicate with native speakers who prefer using connected speech for a more natural, friendly, personal, intimate, and sympathetic interaction, it is probable that nonnative speakers would make an effort to sound like native speakers in order to acquire these positive qualities. Nonnative speakers frequently aim to enhance their language proficiency to sound more natural and be better comprehended by native speakers.

vi. When nonnative speakers are able to communicate in a way that native speakers expect, it can make them feel more confident and comfortable. This eliminates any fears or worries they may have about their language abilities. Feeling confident and comfortable while communicating can improve their language acquisition and encourage more meaningful interactions with native speakers.

To conclude, teaching connected speech processes to EFL students is beneficial in various ways. It helps learners with effective communication and comprehension, helps them understand and be understood by native speakers, allows them to produce natural-sounding spoken English, enhances their language proficiency, and boosts their confidence and comfort in using the language. However, priority should be given to perception over production, as is discussed in the next section.

1.7 Priority of perception over production in teaching connected speech

Many researchers agree that perception precedes production "chronologically and is a prerequisite for the development of productive control of individual sounds" (Escudero 2007, p. 109). Levis (2018) remarks that if speakers struggle with production, these difficulties are likely rooted in perception. While someone's production difficulties may not always be accompanied by difficulties in perception, many persistent problems in production—whether segmental or suprasegmental—are often linked to an inability to hear specific features or to connect what is heard to its functions or meanings.

Levis (2018) states three reasons that perception should be a priority in any language classroom. First, perception is crucial for L2 speakers to be able to understand those they are listening to. As L2 speakers increase in spoken proficiency, it is important that they have opportunity to listen to different speakers with different accents to create flexibility of listening. "Therefore, learners need a well-designed high-variability phonetic training to create new categories for L2 sounds" (Levis 2018, p. 241). Second, improvement in perception leads to improvement in production, even when the latter is not targeted. Third, perception is closely linked to the ability to perceive sounds in different contexts. This is because sounds or features that are difficult to pronounce in isolation can have different qualities when heard in sentences, connected speech, larger discourse contexts, or in speech produced in various registers. Therefore, perception practice should be carried out

not only at the word level but also in environments that include varied speech rates and registers if possible, above the level of the sound or word.

According to Przedlacka (2018), teaching a language necessitates selecting a spoken variety as a model, and in EFL context, it is Standard English, referring to Received Pronunciation (RP) or General American (GR). The choice of the model determines the specific phonetic details that will be demonstrated and taught to the learners. However, achieving phonetic accuracy is not the main focus of instruction or necessary for successful communication. Teachers should not be afraid if their students develop an accent that is undesirable from an RP or GR perspective. Despite the importance of understanding and perceiving the phonetic details of the model being taught, producing them accurately is not considered crucial. This is due to factors such as motivation, learning goals, age, and individual ability, which prevent many L2 learners from achieving a native-like pronunciation. In fact, only a few learners who possess a high motivation and receive intensive input can accomplish this goal. It is therefore important to take into account the immediate and long-term needs of the learners and set realistic goals. Przedlacka (2018) concludes that a model choice should teach aspects which are crucial for intelligibility such as syllable structure, connected speech and intonation.

Jenkins (2000), a proponent of English as an International Language (EIL), discusses the phonological areas that are vital for intelligibility and can be effectively taught, while also highlighting those that are considered unteachable. She provides a list of pronunciation teaching priorities that would ensure that learner of English can be understood anywhere in the world, such as consonant clusters, contrast between long and short vowels, stress placement, and rhythm patterns. However, Jenkins objects to teaching certain aspects of connected speech, such as weak forms, which do not hinder intelligibility when pronounced clearly. Despite this objection, she acknowledges the need to teach these features for receptive skills, such as understanding spoken English. “These learners will still need to work on weak forms (in their traditional sense) receptively in the classroom whatever approach is adopted for production” (Jenkins 2000, p. 148).

In the same line, Celce-Murcia et al. (1996) emphasize that nonnative speakers do not need to acquire all common reductions automatically, but it is important for them to be aware of these reductions and quickly understand the underlying forms. In Gimson’s

(1968) view, foreign learners are not required to replicate the weak forms in their speech. However, it is important for them to understand and follow the rules related to these words and be aware of their presence. Otherwise, they may face difficulties in comprehending a significant amount of everyday English.

There are only a few researchers who advocate focusing on both perception and production when teaching reduced forms. According to Kenworthy (1987), learners need to not only understand and manage weak forms in their listening skills but also actively incorporate them when speaking English. Failing to do so can result in difficulties for listeners in recognizing words and comprehending the intended message, as well as identifying important points of emphasis. Additionally, O'Connor (1980) highlights that speaking English exclusively with strong forms sounds unnatural. The use of weak forms is an integral part of fluent English speech, and learners are encouraged to incorporate the weak forms of 35 English function words to sound more like native speakers.

Most of the previously mentioned researchers agree on the benefits of perceptual training in connected speech processes to enhance listening comprehension, without necessarily focusing on their production.

Conclusion

This chapter has provided a comprehensive and in-depth overview of the background literature concerning connected speech processes in natural spoken English. It has extensively described assimilation, linking, elision, and the use of reduced forms of function words, which are fundamental components of speech simplification and contribute significantly to the rhythm of the English language. Throughout the chapter, detailed explanations, supported by definitions and illustrative examples, have been presented to enhance the understanding of each phonological process. Additionally, all the relevant technical terms have been included to ensure affective grasp of the topic. This chapter has also emphasized the importance of teaching and learning connected speech processes in the development of second/ foreign language learners' perception and listening comprehension ability. The latter skill will be amply examined in the next chapter in relation to phonological awareness and its role in increasing listening comprehension in English.

Chapter Two: Role of Phonological Awareness in Enhancing ESL/ EFL Listening Comprehension

Chapter Two: Role of Phonological Awareness in Enhancing ESL/ EFL Listening Comprehension

Introduction

This chapter explores the perspectives of both ESL/EFL learners and teachers on phonological awareness and its role in enhancing students' listening abilities. It reviews relevant literature and empirical studies from both learner and teacher viewpoints and investigates the challenges faced by L2 learners in comprehending spoken language at the bottom-up level. Moreover, factors such as fast-paced speech, unfamiliar words, pronunciation difficulties, and limited contextual knowledge that hinder their listening comprehension are discussed. Despite the importance of teaching listening skills in ESL/EFL classrooms, it has often received inadequate attention, largely because of the role of phonology in the L2 listening classrooms. The chapter addresses challenges such as task completion focus and difficulty in teaching perceptual activities, and emphasizes the significance of pronunciation instruction in improving listening skills. It includes ten sections. Section 2.1 deals with the role of listening in relation to the acquisition of other skills. Section 2.2 focuses on what makes listening difficult. Section 2.3 is devoted to the features of spoken English and Section 2.4 to the listening processes. Section 2.5 covers speech segmentation strategies, while Section 2.6 addresses the difficulties and challenges ESL/EFL listeners encounter when listening to spoken English. Section 2.7 is about the empirical studies supporting the role of phonological features in L2 listening. Section 2.8 is devoted to discuss other listening challenges faced by ESL/EFL learners. Section 2.9 addresses insights for teachers in ESL/ EFL listening, and finally Section 2.10 deals with explicit instruction in ESL/ EFL listening, pronunciation and connected speech processes in particular.

2.1 Importance of Listening in Acquiring Other Skills

Language learning involves four main skills: speaking, reading, writing, and listening. While all four skills are important, listening is often considered to be the basis upon which the other skills are built (Nation & Newton, 2009; Rost, 2001; Vandergrift,

2007& 2008; Worthington & Fitch-Hauser, 2018). Rost (2001, p. 7) underscores the importance of listening as follows:

> The term listening is used in language teaching to refer to a complex process that allows us to understand spoken language. Listening, the most widely used language skill, is often used in conjunction with the other skills of speaking, reading and writing. Listening is not only a skill area in language performance, but is also a critical means of acquiring a second language (L2). Listening is the channel in which we process language in real time - employing pacing, units of encoding and pausing that are unique to spoken language.

Moreover, Nation and Newton, (2009) argue that in the realm of language learning, listening is regarded as the main means for acquiring language. This implies that by actively listening, learners can gather essential information and knowledge that is necessary for using the language effectively. After gaining enough of this knowledge, learners can move on to speaking. The phase of concentrating only on listening is described as a period where observation and learning take place, providing therefore a crucial groundwork for the development of other language skills like speaking, reading, and writing.

Rost (2006) asserts that the act of listening is vital when it comes to acquiring a second language (L2). The listening opportunities that learners encounter in their learning process create the linguistic environment or act as a basis for acquiring new knowledge and abilities in the target language. In L2 acquisition, learners must not only obtain new information but also develop a wide range of skills to effectively employ this knowledge. "Listening opportunities 'provide the linguistic environment' or 'set the stage' for acquisition. What must be acquired in L2 acquisition is a range of new knowledge and a multi-faceted set of skills for using this knowledge" (Rost 2006, p. 50).

Though listening and reading are commonly classified as passive or receptive skills, they possess several fundamental differences that distinguish them from each other. When it comes to reading, a text can be quickly skimmed by students to understand the main idea, but the same cannot be done while listening. The language needs to be processed in real time by listeners and the luxury of going back is not available unless repetition is explicitly requested (Brown, 2011).

For Nation and Newton (2009) listening is a crucial step in language development, and it serves as a foundation of other skills, especially in the early stages of language learning, both in a person's native language and when acquiring other languages naturally. Despite its importance, it is often overlooked and not given enough attention compared to the other language skills in a classroom setting. This might be explained by the fact that in the past there was an assumption that native speakers of a language naturally acquire listening and speaking skills without the need for explicit instruction. On the other hand, reading and writing skills were considered as skills that required instruction.

Listening is a pivotal skill for ESL/EFL learners as it offers numerous opportunities and advantages. Firstly, it aids in developing language comprehension by providing exposure to the sounds, rhythms, and patterns of English (Worthington & Fitch-Hauser, 2018). Learners become more familiar with pronunciation, intonation, and stress, which are essential for effective communication. Additionally, regular listening practice exposes learners to different accents and speech patterns, enhancing their pronunciation and speaking skills as they have access to models of fluent English speech (Field, 2008; Underhill, 1994). "Speaking ability will tend to emerge naturally as a result of extensive work with authentic listening input" (Rost, 2016, p. 152). Furthermore, listening exposes learners to a wide range of vocabulary in context (Elley, 1989; Hawkins et al. 2010; Rost, 1994; Van Zeeland & Schmitt, 2013; Vidal, 2003), allowing them to learn new words, phrases, and idioms, and understand their usage in everyday conversations

Listening also plays a significant role in improving communication skills (Morley, 2001; Worthington & Fitch-Hauser, 2018). By understanding spoken English more effectively, learners can actively participate in conversations, discussions, and interactions with both native speakers and English learners. According to Rost (2020), listening requires actively engaging with the speakers, establishing a connection, and making an effort to truly understand what they are saying. This implies initiating interactions, showing empathy, and maintaining a good rapport with the speaker. The goal is to fully comprehend and grasp the intended meaning of the communication.

Listening also contributes to acquiring language naturally. It exposes learners to the natural flow of the language, helping them internalize grammar structures, collocations, and sentence patterns (Rost, 1994). Field (2008, p. 13) states that "in the early days of

English Language Teaching (ELT), listening chiefly served as a means of introducing new grammar through model dialogues". This exposure enabled them to develop a sense of what sounds right and ultimately speak more fluently and accurately.

Thus, listening is an essential component of language learning as it helps learners develop various language skills, increase vocabulary, and gain a deeper understanding of the English language. But acquiring listening in L2 listening is not without difficulties for many language learners.

2.2 Listening Difficulties Among EFL Learners

"Listening is also perceived as the most difficult skill to learn because of its implicit and ephemeral nature" (Vandergrift, 2008, p. 84). Many L2 learners find it easier to understand written text than to understand spoken language. This is because when reading, they can see spaces between words and have the ability to go back and re-read if needed, which aids in comprehension. When listening, however, they have to work harder to break down the continuous sound into meaningful parts without the option to look at the text again. This makes listening comprehension more difficult and mentally demanding compared to reading (Vandergrift & Goh, 2012).

Likewise, Brown (2011) explains that when listening, it is important to recognize that words in speech do not have white spaces between them like they do on the page. The listener's task is to mentally separate the words and understand their meaning. This can be challenging for language learners who may only be familiar with the citation forms of words and may struggle to recognize them in different forms or pronunciations. Besides, words in speech undergo processes like assimilation, elision, and insertion, as well as the effects of weak forms, which can further complicate comprehension (Brown, 2011).

Brown (2011) points out that while understanding cognates (similar words in two languages) can aid reading comprehension, they may not be as helpful when listening since the sounds of cognates can differ. Understanding reductions in sounds, blending of words, false starts, hesitations, and back-channel cues to show understanding is also required in listening. Informality is generally more characteristic of spoken language compared to written language, featuring the use of pronouns, conjunctions, and nonverbal communication such as gestures and body language.

He also emphasizes that phonological changes are not the only elements that might affect listening comprehension. Accents, speech rate, pauses and hesitations, prosody (sentence emphasis and intonation), and genres or discourse structure, are some examples of these variables. According to him, the ability of a listener to comprehend and interpret spoken language can be affected by each of these factors.

2.3 Characteristics of Spoken English

Vandergrift and Goh (2012) point out that spoken language can be either planned or unplanned, but most samples are somewhere in between. The more planned speech is, the less likely it will have the characteristics of unplanned speech or spontaneous speech. Consequently, texts with characteristics of planned speech, or texts intended for reading, should not be utilized for listening practice in second/ foreign language acquisition, particularly for listeners with low proficiency who lack the necessary time and cognitive capacity to process dense information. This principle also applies to native language listeners because unlike a written text, information in a spoken text cannot be consulted again unless listeners confirm their understanding or ask the speakers for repetition. Consequently, if teachers wish to utilize texts with planned speech features, the latter should be modified to include more elements of spontaneous speech.

Mendelsohn (2006) argues that language learners should be exposed to material that accurately represents spoken English in their language classes. This implies using recordings or examples of authentic spoken language that demonstrate the features and characteristics of conversational English, rather than relying on written English that has been recorded. He adds that using written English as listening material can be misleading and may not adequately prepare learners for real-life spoken interactions. By using spoken English materials, learners can better understand and familiarize themselves with the nuances, hesitation phenomena, and other aspects of spoken language.

Below is a comprehensive summary of the characteristics of spoken English based on research by Brown (2011), Hedge (2000), Mendelsohn (2006), and Vandergrift and Goh (2012).

- **Intonation and stress:** Spoken English relies heavily on intonation and stress patterns to convey meaning and emphasize certain words or phrases.

- **Articulatory rules of fast speech:** Spoken English exhibits phonetic phenomena such as assimilation (sounds blending together), elision (sounds being omitted), vowel reduction (vowels becoming shorter or less distinct), and centralization (vowels moving towards a centralized position) due to the fast pace of speech.

- **Redundancy and repetition:** Spoken English often contains elements of repetition and restatement, where speakers may rephrase or repeat certain information to ensure clarity or emphasize a point. This helps to reduce misunderstandings in communication.

- **Informality and non-standard features:** Spoken English is more informal and may include non-standard features like colloquial expressions, slang, and regional accents. It reflects the dynamics of conversational interaction and may have a less formal tone compared to written language.

- **Spontaneity:** Spoken language is characterized by its spontaneous nature. It is often unplanned, leading to false starts, hesitations, and pauses as speakers search for the right words.

- **Fillers:** Speakers use fillers such as ‘um,’ ‘uh,’ or other words to fill pauses while they think or search for words.

- **Interjections and exclamations:** Spoken English frequently employs interjections and exclamations, such as ‘oh,’ ‘wow,’ or ‘oops,’ to express emotions or reactions.

- **Chunks and formulaic expressions:** Spoken English utilizes chunks and formulaic expressions, such as ‘you know’ or ‘like,’ either as fillers or to maintain conversation flow.

- **Incomplete/Imperfect Sentences or Sentence Fragments:** Spoken English often involves the use of incomplete sentences or sentence fragments. This is due to the conversational nature of spoken language where thoughts are sometimes left unfinished or interrupted.

- **Turn-taking and interrupting:** In conversations, speakers take turns and may interrupt or overlap each other's speech to express agreement, disagreement, or excitement.

In summary, spoken English is different from written English in several ways. Firstly, it relies on intonation and stress, which helps convey meaning and emphasis. Additionally, there are certain rules to apply in spoken English, such as blending sounds together, omitting sounds, or shortening vowels. Repetition and redundancy are also frequently utilized to ensure clarity in communication. Spoken English is more informal and may incorporate slang or regional accents. It is also characterized by spontaneity, allowing for pauses or hesitations. To maintain a smooth flow, speakers often use fillers and interjections, as well as chunks and formulaic expressions. Another distinctive aspect of spoken English is the presence of incomplete sentences or fragments, which are not as common in written English. Lastly, conversations in spoken English involve turn-taking and interrupting, whether for agreement or disagreement.

2.4 Listening Processes

Applied linguists acknowledge that processing information while listening to spoken language involves two distinct yet complementary processes: bottom-up processing and top-down processing.

2.4.1 Bottom-Up Processing

Bottom-up processing refers to the approach of understanding information by focusing on the individual components or details and using them to form a complete understanding. Bottom-up processing strategies "focus learners on individual components of spoken and written messages, that is, the phonemes, graphemes, individual words and grammatical elements which need to be comprehended in order to understand these messages" (Nunan 1991, p. 4). In the context of listening, bottom-up processing involves relying on the auditory stimuli or sound information; it starts by considering the sounds that are heard by a listener. These sounds then come together to create bigger units in a progressive manner. For example, phonemes merge to form syllables, which then build words and chunks, eventually leading to complete utterances (Flowerdew & Miller, 2005). Every level of input includes the essential elements required for the following, more

advanced level (Buck, 2001). Instead of relying on prior knowledge or expectations, bottom-up processing emphasizes the importance of paying attention to the auditory stimuli received through hearing and using it to build a complete understanding. It is about using the individual pieces of information to form a bigger picture and make sense of what is being said or communicated.

2.4.2 Top-Down Processing

Top-down processing, on the other hand, begins with a listener's overall understanding or knowledge and applies it to the incoming sounds (Flowerdew & Miller, 2005). This implies that higher-level linguistic knowledge, such as grammar and context, influences the interpretation and perception of individual sounds and units. The top-down approach involves using this broader understanding to guide the processing of smaller units, such as phonemes, syllables, and words. The top-down view is characterized by starting with the whole message, which is subsequently broken down into smaller parts. In this process, the overall meaning is initially understood, followed by the analysis of smaller components. For instance, when listening to someone speak, the entire sentence is first taken in, then it is divided into chunks, then into individual words, and finally into the separate sounds of the words (Brown, 2011). The top-down view also entails actively utilizing knowledge and expectations to comprehend the speaker's intended meaning (Flowerdew & Miller, 2005). Background knowledge and contextual cues are employed to make inferences and understand the incoming information. Support is provided by mental frameworks known as schemata which are very important especially for non-native learners. "In L2 listening, the role of schemata is especially important because in NS-NNS interactions and in the L2 listening generally, there are frequently significant mismatches between the speaker's and the listener's schemata that lead to misunderstandings" (Rost, 2006, p. 55). Even before receiving any input, top-down strategies are employed by creating expectations and predictions regarding the upcoming information (Siegel, 2018). Thus, instead of starting with smaller units, like in the bottom-up approach, the top-down approach starts with a higher-level understanding and applies it to the perception of smaller units.

Effective listening typically involves a combination of both bottom-up and top-down processing. The bottom-up process helps to process the auditory input accurately, while

the top-down process provides the necessary context and background knowledge to make sense of the message and fill in any gaps in understanding (Siegel, 2018).

In recent years, there has been a noticeable shift in perspectives regarding bottom-up and top-down listening strategies. Before the 1980s, there was a strong emphasis on developing bottom-up strategies, which involved decoding phonetic combinations to understand words and language chunks. However, there has been a change since the 1980s, giving more importance to top-down strategies (Field, 2008; Siegel & Siegel, 2015; Siegel, 2018). This approach emphasizes the role of contextual information, schemata, and background knowledge in listening comprehension. It is believed that these factors can help fill in any gaps or difficulties that may be encountered while listening. According to Brown (2011), Wolf's model (1987) (as cited in Brown, 2011), for instance, suggests that top-down processing, which involves utilizing prior knowledge and context, compensates for any gaps or lack of knowledge in understanding and utilizing a language. This change reflects recognition of the importance of top-down strategies in the listening process.

However, more recent literature on listening has emphasized once again the significance of the actual acoustic sound that enters the ear, especially for second or foreign language learners. Thus, ESL/EFL listeners find the acoustic sound important as it poses difficulty for them to comprehend spoken English. They need clear and understandable sound to accurately hear the differences between words and phrases. It has been formed that it is important for ESL learners to focus on improving their ability to hear and interpret the sounds of English. This explains why second or foreign language learners rely heavily on bottom-up processing, particularly low level learners while high level ones need both types of processes. According to Brown (2011, p 38), "fluent listeners need both top-down and bottom-up skills, and many of our students are not fluent listeners because they lack ability in bottom-up processing."

In the same vein, Rost (2020) proposes that deliberate practice can be centered on both bottom-up and top-down processes, although the emphasis may vary for native speakers and second language learners. Native speakers usually have their basic skills automated, allowing for more attention to be given to advanced listening skills. On the

other hand, L2 learners might need supplementary deliberate practice to improve their basic skills while also focusing on higher-level listening abilities.

2.5 Main Strategies and Cues listeners Employ to Segment Speech

The way spoken words are said can change within a sentence. Unlike written words, there are no consistent breaks between spoken words, and the speaker does not pause after each word. Instead, listeners have the task of figuring out where one word ends and the next word begins in continuous speech, a process known as lexical segmentation. Accordingly, ESL/ EFL learners' inability to segment speech can lead to comprehension problems in listening, especially for second/ foreign language learners (Field, 2008; Goh & Wallace, 2018).

Rost (2001) states that, in speech perception, various factors such as phonetic quality, prosodic patterns, pausing, and input speed play a role in comprehensibility. While it is widely accepted that people use the same store of information in their memory to understand the meaning of words in both their first language and their second language, research suggests that there are separate stores of phonological information for how words sound in the second language. To understand the meaning of words in the second language, people use their knowledge of how the language sounds. Therefore, to keep up with the speed of spoken language in a second language, it is important to be able to pronounce and understand the sounds of that language. Additionally, understanding grammar and recognizing words quickly is also important. Without these skills, it can be difficult to follow and understand spoken language at a natural pace.

Rost (2006) points out that continuous speech lacks the equivalent pauses or breaks found in written text, making it challenging for listeners to identify word boundaries. This difficulty becomes especially prominent for second language (L2) learners. Without visual cues, word recognition primarily depends on the listener's phonological competence, that is, their ability to understand and differentiate sounds. To aid L2 listeners in this task, two complementary phonological processes come into play: feature detection and metrical segmentation. Feature detection involves recognizing distinct sound features to identify individual words, while metrical segmentation involves identifying patterns of stress and rhythm to help separate words.

According to Vandergrift and Goh (2012), word recognition in second language listening is influenced by some cues, which are semantic/lexical cues, prosodic cues, allophonic cues, and phonotactic cues. These cues have a strong influence and play an important role in understanding the aspects of word recognition in second language listening. They are described in the next section.

2.5.1 Semantic/Lexical Cues

In second/ foreign language learning, understanding connected speech relies heavily on semantic/lexical cues as they involve words that learners are familiar with. L2 learners can rely on these cues to comprehend the meaning of spoken words and identify word boundaries within connected speech. As learners become more proficient in the target language, these cues become even more crucial. However, in the early stages of listening to the target language, learners are likely to encounter unfamiliar sequences of speech. In such situations, they often depend on prosodic cues (Vandergrift & Goh, 2012).

2.5.2 Prosodic Cues

When semantic cues are not available, prosodic features of spoken language, such as stress and tone groups, become more noticeable and important in identifying word boundaries. Specifically, when the meaning of words does not provide clear cues, the way words are pronounced and grouped together in speech becomes more prominent in determining where one word ends and another begins. Research indicates that drawing attention to these prosodic features can be beneficial for second language (L2) listeners (Vandergrift & Goh, 2012). By highlighting these features during instruction or practice, L2 learners can improve their ability to recognize and understand word boundaries in spoken language.

2.5.3 Allophonic Cues

Allophonic cues, according to Vandergrift and Goh (2012), play an important role in the process of segmentation, which involves separating and distinguishing different units of speech. Allophonic cues help listeners identify and recognize different sounds that are associated with a specific phoneme, the phoneme being the smallest sound unit that differentiates words and meanings in a language. Each language may have its own set of phonemes, and within a language, a phoneme can have multiple variations or allophones.

For example, in English, the phoneme /t/ can be pronounced as the aspirated [tʰ] sound in ‘tip,’ the unreleased [t̚] sound in ‘cat,’ or the flap [ɾ] sound in ‘butter.’ These different allophones are perceived as variations of the same underlying phoneme /t/. Listeners use allophonic cues to recognize and differentiate these different variations when listening to speech. These cues help in the process of segmentation, allowing listeners to identify where one sound or phoneme begins and ends in continuous speech. Therefore, allophonic cues assist listeners in distinguishing various sounds associated with a single phoneme, aiding in the segmentation of speech and recognizing different sound units in spoken language.

2.5.4 Phonotactic Cues

Phonotactics, in the field of phonetics and phonology, refer to the language-specific rules that determine which sounds can be combined and which cannot. Each language has its own set of rules governing how consonants and vowels can be arranged. For example, in English, certain consonant clusters like ‘br’ in ‘break’ or ‘bl’ in ‘blue’ are permissible according to its phonotactic constraints. On the other hand, English typically does not allow certain consonant clusters such as ‘ngk’ or ‘tsr.’ Listeners utilize phonotactic cues to recognize and process spoken language. By being familiar with the typical sound patterns and clusters that are allowed in the target language, listeners can make predictions and form expectations about the sounds they are likely to encounter. This aids in swiftly identifying and comprehending words and their boundaries. Phonotactic cues also play a role in word segmentation. For example, listeners use knowledge of the typical sound patterns of their target language to identify potential word boundaries. If a sequence of sounds violates the phonotactic rules of a language, it often indicates a word boundary (Vandergrift & Goh, 2012).

To summarize, using these cues can help second language learners to improve their comprehension of spoken language by developing their phonological competence. The use of various cues such as semantic/lexical cues, prosodic cues, allophonic cues, and phonotactic cues, is part of being aware of the processes involved in word recognition and segmentation.

2.6 Difficulties and Challenges of L2 Listeners to Spoken English

This section is devoted to discuss the difficulties and challenges of ESL/EFL listeners based on relevant literature and empirical studies that support these issues.

ESL/ EFL learners often face difficulties at the bottom-up level, which can affect their listening comprehension. This is often linked to their poor phonological skills which do not enable them to effectively decode and understand spoken language. Numerous studies have shown that English learners encounter difficulties processing sounds at the phonological level. Listening comprehension for ESL/EFL learners is further complicated by factors such as rapid speech, unfamiliar vocabulary, pronunciation obstacles, and a lack of contextual knowledge, all of which can be taught to enhance understanding of the spoken language.

As mentioned previously, understanding spoken language involves two processes: bottom-up processing and top-down processing which work together to facilitate comprehension. However, most of the difficulties L2 learners face stem at the bottom-up level, such as understanding the individual sounds, identifying word boundaries in continuous speech, particularly when encountering reduced forms or connected speech phenomena; and understanding grammatical rules and structures of the spoken language. Difficulties at the bottom-up level can affect L2 learners' listening comprehension. They may struggle to understand the individual parts of spoken English and piece them together to make sense of the overall message.

According to Norris (1994), native speakers have an advantage in using top-down processing due to their cultural background. They can utilize their past knowledge and experiences to foresee, predict, and infer meaning. This advantage does not apply to foreign language learners who first need to become proficient in bottom-up processing in order to understand spoken language. He argues that foreign learners of English should not be expected to employ the same strategies as native speakers when listening to spoken English. Without knowledge of how to break down a stream of sound into words, phrases, and sentences, learners cannot develop strategies such as inference, prediction, and using contextual knowledge to understand a speaker's message. He writes: "Before foreign students can ever begin to incorporate top-down processing skills in comprehending

spoken English, they must be able to decode the sounds they hear and develop [bottom-up] micro-skills" (p. 48).

Goh and Wallace (2018) also stress that skilled listeners can understand spoken language quickly and effortlessly, as they automatically decode the speech they hear. On the other hand, less skilled listeners have difficulties understanding speech because their decoding process is slower and more deliberate. They struggle with decoding because they have limited knowledge of the language and their ability to process information is not as efficient. Their limited knowledge of the language hinders efficient information processing, making it difficult for them to analyze and understand the sounds and structures of the language, which ultimately affects their listening comprehension. As a result, these learners struggle to understand the meaning of spoken language because they become overly focused or fixated on individual words. Instead of being able to move beyond the word level and understand the overall message, they may get stuck and have difficulty grasping the higher-level meaning of the speech. This fixation on individual words can hinder their overall comprehension and make it challenging for them to understand the intended message being conveyed.

Accordingly, instructors should provide opportunities for learners to develop specific micro-skills when teaching listening comprehension. These micro-skills, as defined by Richards (1983), are individual abilities in listening that serve as specific teaching goals. Richards recommends a taxonomy of 33 micro-skills that foreign learners should practice for conversational listening, with 19 of them falling under bottom-up processing focusing on smaller units like sounds or words. Norris (1994) highlights that among these micro-skills, 7 of them may be particularly challenging for foreign learners, particularly at the phonological level.

- Ability to discriminate among the distinctive sounds of the target language.
- Ability to recognize the stress pattern of words.
- Ability to recognize the functions of stress and intonation to signal information structure of utterances.
- Ability to identify words in stressed and unstressed positions.
- Ability to recognize reduced forms of words.
- Ability to distinguish word boundaries.

- Ability to recognize elliptical forms of grammatical units and sentences.

Field (2003) also emphasizes the importance of focusing on bottom-up listening skills and highlights certain phonological elements that can potentially hinder effective communication. According to him, a certain level of perceptual information, even if it consists of only a few words, is necessary before contextual knowledge can be applied. However, it is worth noting that many communication breakdowns at higher levels often stem from lower-level errors. He notes: "Some modicum of perceptual information even if only a few words, is clearly needed before contextual knowledge can be brought to bear. But it is also a fact that many high-level breakdowns of communication originate in low-level errors" (p. 325). To support his point, Field identifies four main perceptual causes that can result in misunderstandings, all of which are directly linked to word recognition (Field, 2003, p. 327).

- Learner knows the word but attributed the wrong sense.
- Learner failed to recognize a phonetic variation of a known word.
- Learner knows the word in reading but not in spoken vocabulary.
- Learner was unable to segment the word out of a piece of connected speech.

Field (2003) points out that lack of pauses between words is one major cause of segmentation problems. Another equally important cause is the modification of citation forms of words in connected speech. This leads to difficulty for learners due to three speech phenomena: reduced forms, assimilation, and elision. For him (2003), the most effective way to support L2 listeners is through traditional bottom-up exercises like dictation which involves closely focusing on the phonetic form of the language. Similarly, Vandergrift (2008) states that development of word segmentation skills is a major challenge faced by L2 listeners. "Unlike readers, listeners do not have the luxury of spaces to help them determine word boundaries. They must parse the sound stream into meaningful units and, owing to stress patterns, elisions and reduced forms, word boundaries are often hard to determine" (Vandergrift, 2008, p. 91). As a result, L2 listeners may feel confused or puzzled by these phonological changes in connected speech. In the same vein, Tsui and Fullilove (1998) state that proficient listeners need to rely on their perception and word segmentation skills because they cannot always depend on their prior knowledge to compensate for unfamiliar words in texts that may deviate

from expected patterns or structures. Therefore, the development of perception and word segmentation skills is an essential part of L2 listening development.

Likewise, Brown (1990) suggests that foreign learners should first focus on mastering the phonological code of the language they are learning, which refers to the sounds and pronunciation patterns of a language. She argues that without a solid understanding and control of the phonological code, learners will not be able to comprehend or produce meaningful linguistic messages. Brown (1990) acknowledges the importance of both bottom-up processing and top-down processing, but emphasizes that mastery of the phonological code is a fundamental requirement for effective language learning.

Vandergrift and Goh (2012) suggest that engaging in post-listening perception activities can enhance learners' understanding and recognition of sounds and phonological rules. This knowledge is especially beneficial for learners as it aids in automating their perception process. By repeatedly encountering unfamiliar sounds and learning how sounds change in connected speech, learners can better comprehend various forms of spoken language. Additionally, learners can utilize these activities to develop pragmatics, focusing on intonation and rhythm, which directly impact meaning in interactive listening situations.

It is clear that phonological modifications can make it difficult for non-native speakers to understand the spoken language; and understanding how sounds change and how written words are pronounced in connected speech is crucial for language learners, as it helps them make sense of the phonological changes that occur and prevents confusion or uncertainty. This knowledge of how sounds transform in connected speech is an essential part of a learner's awareness of language processing (Vandergrift & Goh, 2012).

2.7 Empirical Studies Supporting Phonological Features on L2 Listening

Numerous empirical studies have provided evidence concerning ESL/EFL learners struggle with phonological skills, particularly in decoding sounds, recognizing word boundaries, and understanding reduced forms in connected speech. Developing bottom-up processing micro-skills and practicing phonological awareness can help improve their listening comprehension (Brown, 1990; Field, 2003; Norris, 1994; Richards, 1983;

Vandergrift and Goh, 2012; and Vandergrift, 2008). In fact, many problems in understanding spoken English arise from the way sounds are processed at the phonetic level. Several research studies have been conducted around the world to identify the challenges faced by English learners in both second and foreign language learning contexts (ESL/EFL) when it comes to listening to spoken English.

Henrichsen (1984), in the U.S.A., was among the first researchers to examine the effect of the presence of sandhi-variation ─ referring to connected speech processes that reduce the perceptual saliency of many features of speech ─ on the comprehension of normal spoken English input by ESL learners. Sixty-five students at Brigham Young University, (Hawaii Campus) participated in this study. Three different groups of three distinct English proficiency levels were formed, eighteen low-level ESL students, thirty-two high-level ESL students and fifteen English native speakers. All the participants took a dictation test that included fifteen taped sentences; each sentence appeared twice, representing the presence and absence of sandhi-variation. Henrichsen's study yielded three results. (1) There was no significant difference at the native speaker level; the native speakers were able to recognize the sentences in both conditions presence and absence of connected speech processes. (2) There was significant difference between native speakers' scores and high-level ESL students' scores in the presence condition but were not significant in the absence condition. (3) There was significant difference between high-level ESL students' scores and low-level ESL students' scores in the presence and absence of sandhi-variation. Henrichsen's results are supportive of the hypothesis that there is a significant interaction between level of proficiency and comprehension of input in the presence of sandhi-variation.

To examine the real-time listening difficulties experienced by a group of Chinese ESL students preparing for undergraduate studies, Goh (2000) utilized a cognitive framework of language comprehension, originally proposed by Anderson (1995). This framework breaks down the process of language comprehension into three stages: perception, parsing, and utilizing, which represent different levels of processing and can occur simultaneously during listening. Goh (2000) collected data through weekly diaries, semi-structured interviews, and immediate retrospective verbalization. Her analysis revealed 10 real-time comprehension problems occurring in the stages of perception,

parsing, and utilization. Among these problems, half were related to perceptual processing, including word recognition and ineffective attention.

In the same context, and according to Gao's (2014) research, Chinese university students at an intermediate level face challenges in listening comprehension due to their limited understanding of phonology, insufficient vocabulary, and a lack of awareness of the characteristics of connected speech.

Zahedi et al. (2007) examined the effect of the English phonological features on 125 Iranian university EFL students from three proficiency levels: elementary, intermediate, and advanced. The researchers used a dictation test that included sentences containing phonological features such as assimilation, elision, liaison, and palatalization. The results showed that the participants were weak at perceiving phonological features; and the most problematic ones were assimilation and elision.

Wong et al. (2017) examined also the role of the perception of reduced forms─referring to connected speech processes such as assimilation, contraction and elision─of English words in connected speech comprehension and the phonological skills among Chinese ESL learners. Sixty Chinese speaking undergraduate students were tested with a battery of English listening and phonological tasks. The test included seven tasks dealing with general listening comprehension, reduced forms dictation, minimal pair discrimination, speech gating, phonemic awareness, receptive vocabulary, and nonword repetition. Using regression analyses, the results showed that there were only two factors that were important in predicting how well learners understood what they heard overall. These factors were: receptive vocabulary, i.e. understanding the meaning of words or having a good vocabulary, and perception of reduced forms, i.e. being able to understand speech that is fast or connected, These two factors had a significant impact on learners' ability to comprehend what they heard during the test. Wong et al. (2017) found that more research is needed to understand how phonological skills develop and are important for learning to listen and understand a second language. They recommended using longitudinal studies or training-based approaches to investigate this issue further.

Hamouda and Aljumah (2017) conducted a study to understand how the use of connected speech features affected the listening comprehension of Saudi EFL English

learners. They explored the connection between the learners' proficiency level and their familiarity with different types of connected speech. The study involved 64 English majors who were divided into three groups: high-proficiency, mid-proficiency and low-proficiency. These participants were given a dictation test that included 25 digitally recorded sentences containing connected speech features. The study revealed four main findings. (1) The presence of connected speech had a negative impact on the listening comprehension of Saudi learners. (2) This negative influence was observed across all proficiency levels. (3) The interaction between connected speech and proficiency levels was significant. (4) Intrusion and elision were identified as the most challenging types of connected speech for all participants.

Sung et al. (2019) studied how ESL learners are able to compensate for phonological assimilation. They compared the compensation patterns between native English listeners and advanced Korean learners of English by conducting two perception experiments. In the discrimination experiment, both listener groups performed better in detecting assimilated speech when it is presented in a context where phonological modification is applicable. However, the Korean listeners were less sensitive than the native English listeners when it comes to detecting differences in word final consonants in an inapplicable context. In the identification experiment, both groups showed that they were able to differentiate between original non-coronal consonants and assimilated forms of coronal consonants. The researchers concluded that, like native English listeners, advanced learners of English are able to use the sentential context to perceive assimilated speech and improve their L2 phonological system as they gained more experience with the language.

It is worth noting that Sung (2018), one of the researchers mentioned earlier, conducted a study on Korean listeners with a low English proficiency level. The results revealed that these participants did not show phonological compensation for English place assimilation. This finding highlights the significance of listeners' experience in perceiving and adjusting to English assimilation.

Joyce (2019) conducted a study to determine which specific skills are most important for listening comprehension in second language (L2) learners of different proficiency levels. The study involved 443 Japanese university students, who were tested on their

proficiency in the second language as well as on various linguistic and psycholinguistic sub-skills associated with listening. The results indicated that proficiency in syntactic knowledge and knowledge of phonological modifications plays a crucial role in L2 listening comprehension. Higher proficiency learners showed a better understanding of reduced forms and their ability to identify word boundaries. They were also able to parse smaller linguistic units into larger entities, allowing them to process language in larger chunks and develop more coherent representations. These learners applied higher-level processing skills to enhance their understanding. In contrast, lower proficiency learners struggled to understand spoken language due to limited knowledge of grammar and connected speech. They had difficulty recognizing reduced forms and breaking down the language they heard. Consequently, they heavily relied on their ability to perceive sounds and on linguistic and psycholinguistic skills, such as being aware of sounds and remembering information, to understand the message.

In her study, Bilianska (2019) highlights the importance of incorporating bottom-up practice activities in university EFL classrooms to improve listening instruction. She discusses the listening difficulties and reasons behind the lack of listening fluency in English among Ukrainian pre-service teachers. The author also explores the role of the speech processor in teaching listening comprehension and its psycholinguistic development. Speech processor refers to the cognitive mechanism or system within the human brain that is responsible for processing and comprehending spoken language. It involves various cognitive processes, such as decoding phonetic and phonological information, parsing and interpreting linguistic structures, and extracting meaning from the speech input. She suggests the use of activities such as transcribing and noticing exercises as well as reading aloud and shadow reading to improve their L2 pronunciation to enhance perceptual experience (such as transcribing, noticing exercises) and improve L2 pronunciation for Ukrainian university students. She concludes that improving speech perception can make the listening process more automatic and enhance the effectiveness of developing top-down listening skills.

In his study, Carney (2021) Carney (2021) examined why L2 listeners struggle to understand texts containing familiar words. He observed that 15 Japanese English language learners, all native speakers of Japanese with varying levels of English

proficiency, had difficulties understanding texts that included familiar words. To understand why familiar words were often misunderstood during multiple listening opportunities, a diagnostic procedure involving two tasks, using recalls in L1 and repetitions in L2, was used. The findings revealed that among the factors contributing to difficulties in listening comprehension were modifications in English connected speech, and misinterpretation of contextual information. The study findings indicate that even texts containing frequently used words or familiar spelling can still be consistently challenging for L2 learners to understand.

Momen Omar (2022) investigated the perception of Libyan EFL learners regarding the challenges they face when listening to connected speech, taking into consideration their limited exposure to native speakers' connected speech. Data was collected from 62 intermediate level Libyan EFL learners through the use of a questionnaire that focused on identifying processing problems related to listening comprehension. The findings indicate that the participants experience moderate to high difficulty levels when trying to understand connected speech, and these challenges in comprehending spoken language are not limited to specific aspects but are rather present throughout the entire process of listening and understanding. There is also a significant positive correlation between the different types of listening processing problems.

Zoghalmi (2023) investigated the role of different cues in the process of segmenting speech in a second language (L2) in real-time. The study specifically focuses on the relative contributions of bottom-up (acoustic-phonetic) and top-down (contextual) cues to successful segmentation. Using the gating paradigm, which progressively reveals connected speech, the study observed how participants formed and revised hypotheses as more information became available. The participants in the study were 21 French and Tunisian undergraduates, who were selected from a larger pool of 226 participants based on their proficiency levels in English listening and vocabulary tests. They were categorized as skilled (11 participants) or unskilled (10 participants) listeners. Descriptive statistics, analysis of variance, and qualitative analysis were performed on the data collected. The results of the study indicated that contextual cues have an early effect on segmentation independent of L2 proficiency, particularly when the context is constraining. In non-constraining contexts, both skilled and unskilled L2 listeners experience delayed

segmentation, but unskilled listeners require more bottom-up information to process the speech input and revise their segmentation hypotheses.

The cited studies primarily focused on identifying challenges and understanding the impact of connected speech processes on ESL/EFL listening comprehension, rather than implementing interventions. They reveal that learners' proficiency levels significantly affect their ability to perceive and comprehend connected speech, highlighting the challenges posed by features like assimilation and elision. They utilized various methodologies such as dictation tests, perception experiments, and cognitive frameworks to explore these aspects. In contrast, the present study stands out for its focus on implementing an intervention (teaching connected speech processes) and evaluating its effectiveness in improving listening comprehension among Algerian EFL students at ENSB. It addresses the need for targeted instructional strategies to enhance phonological awareness and connected speech skills in language learners.

The next section is devoted to a discussion of other listening challenges faced by L2 learners when trying to understand spoken English.

2.8 Other Listening Challenges Faced by ESL/EFL Learners

There are additional factors that affect listening comprehension in second and foreign language learning. They include issues like fast speech rate, unfamiliar vocabulary, pronunciation difficulties, and lack of background information. Concerning speech delivery, many language learners often find the speed at which L2 speakers talk to be challenging, leading to difficulty in understanding what is being said. "It is common sense that utterances spoken quickly are more difficult to understand than utterances spoken slowly. There is less time to segment the speech stream and recognize vocabulary. Articulation suffers, and words lose their shapes" (Brown, 2011, p 63). This implies that understanding spoken language becomes more difficult when it is spoken quickly. Limited time makes it harder to identify words and comprehend their meaning, and fast articulation can lead to less clear pronunciation, making words harder to distinguish. This perception of speed is typically caused by learners struggling to recognize certain spoken words or make connections between the sounds they hear and the written form of the language (Vandergrift & Goh; 2012; Goh, 1999, 2000).

On the other hand, limited vocabulary knowledge poses significant challenges for L2 learners when it comes to comprehending unknown words or phrases in connected speech. This limitation acts as a major hindrance, and prevents learners from accurately grasping the meaning behind some unfamiliar linguistic elements. As a consequence, the overall message being conveyed becomes increasingly difficult to understand. When encountering unfamiliar vocabulary, a learner's lack of knowledge may lead to confusion, reduced comprehension, or even misunderstanding of the intended message. With a limited lexicon, L2 learners struggle to make connections between words and their corresponding meanings, hindering their ability to accurately interpret the context of the conversation.

A study was conducted by Hamouda (2013) in Saudi Arabia, with 60 first-year Saudi EFL male university students. Data were collected through questionnaires and interviews. The study's results indicated that these students faced various listening challenges, including encountering unfamiliar words, struggling with the length of spoken texts, difficulties with speed rate and pronunciation due to inability to recognize words in connected speech due to sound modifications. Similarly, a study conducted by Alzamil (2021) with 87 Saudi female students produced nearly identical results. Consequently, it can be concluded that Saudi female students also encounter listening difficulties related to speech rate, pronunciation, limited vocabulary, and a lack of background information, and gender makes no difference.

Assaf (2015) conducted a study to examine the listening difficulties of EFL students at the English Language Center in Arab American-Jenin, Palestine. Data was collected through a questionnaire and interview. The study revealed that factors such as difficulty recognizing words, lack of background information, unfamiliar vocabulary, and fast speech rate—especially the challenge of understanding words whose pronunciation is modified in connected speech—significantly impacted listening comprehension. Similarly, Izzah and Keeya (2019) investigated the listening difficulties of 86 Indonesian EFL university students using a self-structured questionnaire. The findings indicated that unfamiliar words, unclear word meaning, fast speech rate, and pronunciation due to variations in how words are pronounced in different contexts, were the main challenges faced by Indonesian students in listening comprehension.

All the previous studies mentioned above used students as the source of data collection. However, Nushi and Orouji (2020) took a different approach by involving teachers as participants to understand the listening difficulties of EFL learners. Their research was conducted in Iran and included 208 teachers who held degrees in TEFL (BA, MA, or PhD) and taught English at different language institutes across Iran to learners of different proficiency levels. To gather data, the researchers used an online questionnaire and conducted semi-structured interviews. The findings of their study indicated that Iranian learners faced various listening difficulties, such as unfamiliar topics, unfamiliar words, difficulty recognizing words they know in written form but not in spoken form, and challenges with fast speech.

Aoiz Pinillos's (2021) study aims to examine how the vocabulary size of language learners contributes to their listening ability. The researchers conducted an investigation involving 284 English language learners, assessing their vocabulary size by using both an aural and written vocabulary test. To determine the participants' abilities and the difficulty of items, a standardized listening test was used and the data were analyzed using the Rasch model. The data analysis provided evidence that supports the following findings. 1) There is a strong and positive relationship between second language vocabulary knowledge and listening comprehension. 2) Aural and written vocabulary knowledge represent distinct dimensions. 3) Aural vocabulary knowledge is a better predictor of listening comprehension compared to written vocabulary knowledge, especially for weaker listeners. Given that the study found aural vocabulary to be a better predictor of listening success than written vocabulary, it underscores the importance of training learners to recognize and process connected speech. This is because connected speech can drastically alter the phonological form of words, making aural recognition skills crucial for effective listening comprehension.

As indicated by these studies, ESL and EFL learners in different contexts encounter similar listening difficulties, particularly with spoken language. The following section addresses teachers of L2 listening comprehension and reviews some studies on improving the comprehension of spoken language.

2.9 Insights for Teachers of ESL /EFL Listening

Listening skills play a crucial role in language development, and the role of teachers is important in improving their students' listening abilities in the ESL/EFL classroom, and most probably their perception of connected speech. Although teaching listening skills is widely practiced in language education, it is still undervalued for various reasons; and though there are plenty of listening materials and audiovisual resources available for classrooms, listening sessions often get reduced due to time constraints and other pressures on teaching hours (Field, 2008).

According to Field (2008), one reason for downgrading the teaching of listening is because it is commonly viewed as a difficult task. This perception stems from the belief that listening is a passive skill that takes place within the learner's mind. Unlike speaking and writing, listening is not easily tangible and the results of learning it are not easily demonstrated. Even after extensive practice, there may be little evidence of improvement in performance. Some teachers even make the claim that listening skills can be acquired simply by exposure to the target language, as the learner's ears adjust to the phonology of the language and transfer listening skills from their first language to the second through a process of osmosis (Field, 2008).

Another reason pointed out by Field (2008, p. 3) is "The prevailing tendency in the teaching of listening is to provide practice and more practice without clearly defined goals." Thus, the common approach among teachers when it comes to teaching listening skills is to have students practice a lot without having clear goals or objectives in mind. Similarly, Brown (2011) states that "One of the things in the air at the time was the absolute necessity of teaching listening skills. Real skills, real teaching— meaning an exclusive focus in the lesson on how to listen" (p. 2). In this context, the author shared his own language teaching experience in Japan and pointed out that listening skills were not taught or developed well in the educational system. He emphasizes the importance of teaching listening skills by focusing exclusively on improving listening abilities during lessons.

Although some of these studies do not necessarily relate directly to spoken English and the teaching and learning of connected speech in listening comprehension, it is worth

mentioning that most of them highlight the common practice of testing listening skills rather than teaching them explicitly in the classroom, as discussed in the next section. These studies emphasize the need for more research and insights into effective listening instruction methods to improve overall language learning outcomes, as well as the significance of explicitly teaching listening strategies and techniques to enhance learners' listening proficiency, with a particular focus on teaching pronunciation, specifically connected speech processes.

2.9.1 Listening is Tested and Not Taught

A number of studies point out to the teaching of listening in ESL/ EFL contexts arguing that listening is tested and not taught (Brown, 2011; Field, 2008, 2019; Siegel, 2014, Vandergrift, 2008; Vandergrift & Goh, 2009). Field (2019) explains that the listening approach adopted in many ESL/ EFL classrooms focuses "on the products of listening rather than the processes that contribute to it" (p. 283). This implies that listening instruction should not only focus on getting correct answers to comprehension questions but should also emphasize the actual process of listening. Thus, it is important to understand how learners engage with listening activities, how they form meaning from spoken language, and what challenges they face during the listening process, rather than solely focusing on the end result of getting the answers right. Therefore, teachers need more information about the specific skills they are trying to teach, ways in which learners may struggle in a second/ foreign language context, and how listeners handle breakdowns in comprehension.

Field (2002, 2003, 2008, and 2019) argues that teachers should instead shift their focus towards diagnosing and addressing listening problems in order to improve student learning. This can be done through activities such as dictation and exercises that target both lower-level, bottom-up, and higher-level, top-down listening skills. He suggests that more time should be dedicated to post-listening activities where learners' difficulties can be identified and addressed.

In the same line, Mendelsohn (2006) points out to the distinction between teaching listening and testing listening skills. He argues that teaching listening involves instructing learners on how to listen and comprehend meaning, similar to teaching any other skill.

However, traditional listening classes often focus more on testing than on teaching. These classes require students to listen and answer questions without being taught effective listening strategies or techniques. As a result, students are not trained in how to understand the meaning of listening materials. The author suggests that there should be a shift towards prioritizing the teaching of listening skills rather than solely testing them, in order to better equip learners with the ability to actively listen and comprehend.

Vandergrift and Goh (2012) argue that language learners are often taught how to write and speak, but they receive little guidance on developing their listening skills. This lack of support may be due to teachers' uncertainty about teaching listening effectively. The authors emphasize the importance of language teachers understanding the listening process, comprehension strategies, and helping students achieve success in listening skills and overall language proficiency. In addition, they highlight the ongoing challenges faced by ESL learners in improving their listening skills. Despite their desire to enhance these skills, learners often feel they have little control over listening comprehension. According to the authors, classrooms generally provide insufficient attention and assistance to listening, which may create anxiety in learners.

Other studies have revealed that decoding skills are often missing in the teaching and learning of L2 listening comprehension. Abad's (2023) study examined the practices and beliefs of 50 EFL teachers from public and private universities in Cuenca, Ecuador regarding listening instruction. The study utilized a mixed-method approach and sought to gather empirical evidence on listening teaching practices and understand teachers' beliefs about listening. Data were collected through a questionnaire and structured observations of classroom activities. The findings indicated that instructional practices tend to prioritize task completion rather than the development of listening skills. However, these practices focus more on the end result rather than the process, and the decoding skills are lacking.

Madarbakus-Ring (2021) examined teachers' perceptions and practices in teaching listening within a pre-sessional English for Academic Purposes (EAP) programme at a university in New Zealand. Data were collected through interviews and classroom observations. The teachers found listening to be a challenging skill to teach and prioritized activities focused on the end result or product of listening, along with vocabulary-based tasks, while avoiding perceptual activities. They expressed a need for more guidance in

incorporating perception tasks, such as distinguishing word boundaries, and highlighted the requirement for additional training to better address learners' specific difficulties.

Emerick's (2018) study sought to understand what university language teachers believe about explicit teaching and authentic materials in second language listening instruction. The researchers collected data from language teachers in Spanish and English departments at eight universities in Pennsylvania, United States, through an online questionnaire and semi-structured interviews. The results highlighted a mismatch between teachers understanding of effective teaching practices and their reported actions in the classroom. Therefore, there is a gap between what they know they should do based on their beliefs and what they actually implement in their teaching. Emerick's study highlights the need for more explicit teaching strategies and the use of authentic materials in second language listening instruction. The present study which focuses on connected speech processes aligns with this, as teaching connected speech explicitly involves using authentic speech samples and guiding students through the complexities of natural spoken language. Addressing connected speech requires teachers to not only understand its importance but also integrate it into their classroom practices.

Karimi & Nazari (2017) investigated the beliefs of Iranian EFL teachers regarding listening and how these beliefs influenced their instructional practices. The study involved administering a listening beliefs questionnaire to 85 teachers, followed by classroom observations. The findings revealed that time, among other obstacles, was a major constraint for teachers from implementing desired listening activities in the classroom. This means that teachers may not have sufficient opportunities to design and incorporate all the desired pre-task, while-task, and post-task activities into their lessons. The researchers also call for teacher training to benefit from professional development specifically focused on developing their teaching of listening comprehension. This training can help teachers gain a deeper understanding of the listening process, increase their awareness of effective instructional strategies, and provide them with the necessary skills to design and implement engaging listening activities in the classroom. This study also highlights time constraints as a significant barrier to implementing effective listening activities. Similarly, teaching connected speech processes can be time-consuming,

requiring dedicated time for explicit instruction and practice. Both studies call for teacher training to manage classroom time more effectively and integrate essential listening skills.

Alrawashdeh and Al-zayed (2017) conducted a study in Karak schools, Jordan, to understand the challenges faced by English teachers while teaching listening comprehension and their attitudes towards the subject. The researchers used a questionnaire and informal interviews to gather data. The findings revealed the difficulties teachers encounter, highlighting the need for additional training to improve their skills. The study also identified challenges in the educational environment, such as electricity problems and lack of resources. It emphasized the importance of multimedia for effective teaching and investigated factors that influence teachers' attitudes, such as using authentic materials and trying new approaches. The study also emphasized the significance of skilled and creative teachers for successful teaching of listening comprehension. The challenges faced by teachers in Jordan, such as lack of resources and training, are similar to those in this study's context. Teaching connected speech processes also demands resources like multimedia tools and authentic listening materials. Overcoming these challenges can lead to more effective listening instruction. Both studies emphasize the importance of having skilled and creative teachers to successfully teach listening comprehension, including connected speech.

In a study by Graham et al. (2014), the researchers surveyed 115 foreign language teachers in England about how they teach listening. The study aimed to see if teachers' beliefs and practices matched what research suggests, if there was consistency in their beliefs and practices, and what factors influenced them. The results showed that teachers understand the importance of teaching listening skills, but their actual teaching focuses more on completing tasks rather than building listening abilities. This is because the textbooks they use prioritize assessments over building listening skills. This can have a negative impact on students' confidence in listening. Teachers in England may have difficulty teaching listening because of this approach. To help address these challenges, it is important for teachers to receive professional development that supports them in using research-based strategies. The focus on task completion over skill building in listening instruction aligns with the need to prioritize listening skills development, including connected speech processes. Teachers should aim to build students' listening abilities by

incorporating exercises that focus on recognizing and understanding connected speech. The need for professional development to support research-based strategies in teaching listening, as highlighted by Graham et al., is directly relevant to this study. Training teachers to understand and teach connected speech processes can enhance their overall effectiveness in listening instruction.

An interesting study was conducted by Bouziri (2007) in Tunisia. The Tunisian context shares a remarkable resemblance to the Algerian context. In her study that she conducted on Tunisian university teachers' attitudes towards teaching listening, she concluded that a product-oriented approach was prevalent, focusing on the final outcomes of instruction rather than the overall development of listening skills. She observed that listening received less attention in Tunisian universities compared to other subjects. Furthermore, inexperienced teachers, including student teachers and secondary school teachers, were often assigned the task of teaching the listening course. Also, the institutions lacked structured guidelines, with only a basic document listing the topics covered in the course. It is clear that there is a lack of structured or comprehensive guidelines for teaching listening, with no detailed descriptions or objectives outlined for the course. To address these challenges, Bouziri (2007) called for a new listening syllabus that considers students' needs, current level, weaknesses, and intended use of their listening skills. The syllabus should have clear objectives for students to achieve and provide appropriate materials aligned with their needs. Additionally, it should include comprehensive definitions and practical examples of different listening skills to enhance understanding and application in real-life situations. Bouziri's finding of a product-oriented approach in Tunisian universities, focusing on final outcomes rather than skill development highlights the need for a process-oriented approach in teaching connected speech. Emphasizing the process of listening and understanding connected speech can lead to better listening comprehension skills. The lack of structured guidelines for teaching listening in Tunisia highlights the necessity for clear objectives and comprehensive syllabuses that include connected speech processes.

More relevantly to the present study, Rosa (2002) examined ESL teacher's perspective on teaching reduced forms in improving learners' listening comprehension. The participants in this study were ESL instructors on the island of Oahu, Hawaii, who

received a survey questionnaire. The majority of participants were native English speakers. They included teachers from various institutions, such as the Hawaii English Language Program, English Language Institute, and Brigham Young University Hawaii, with varying levels of teaching experience and linguistic backgrounds. The results showed that although teachers recognized the importance and benefits of teaching reduced forms in spoken English, they tended to spend a minimal amount of class time on this topic. Additionally, even though most teachers believed that reduced forms occurred in all types of spoken English, they usually only covered common examples within context rather than explicitly teaching them. However, teachers who received specific training in reduced forms were more likely to teach them explicitly and rate their students' interest in reduced forms instruction higher. The results also indicated that more teacher training and the development of materials were needed to bridge the gap between teachers' perspectives and their actual in-class experiences. Rosa's study on teaching reduced forms in spoken English is directly relevant to this present study on connected speech. Both studies emphasize the importance of teaching features of natural spoken language, such as reductions and connected speech, to improve listening comprehension. The need for more teacher training in teaching reduced forms aligns with this study' findings on the importance of training teachers to handle connected speech processes. Proper training can bridge the gap between teachers' beliefs and their classroom practices.

In conclusion, the studies surveyed suggest several key findings and challenges in listening instruction. These include a focus on task completion over skill development, a lack of emphasis on the listening process and decoding skills, difficulties in teaching and implementing perceptual activities, a mismatch between teachers' beliefs and actions, time constraints, resource limitations, and a need for professional development. To address these challenges, it is crucial to prioritize skills development, provide explicit instruction and authentic materials, offer teacher training and support, allocate sufficient time for listening activities, and establish comprehensive guidelines and syllabuses aligned with student needs. Implementing these recommendations can enhance the effectiveness of listening instruction, as is discussed in the next section.

2.9.2 Need for Authentic Materials for Teaching Spoken English and Listening Comprehension

Vandergrift and Goh (2012) go further explaining why listening is neglected and state that teachers and instructional materials do not prioritize the teaching and improvement of listening skills as much as other aspects of language learning: "the development of listening receives the least systematic attention from teachers and instructional materials" (p. 4). Regarding this matter, the choice of materials used in teaching ESL/ EFL listening skills remains a subject of continuous discussion among educators. One central aspect of this debate revolves around the selection between authentic and non-authentic materials, and with respect to the teaching of connected speech, it seems that authentic materials offer better opportunities for learning because they are natural and spontaneous, as is discussed below.

Underwood (1989, as cited in Vandergrift & Goh, 2012), describes authentic listening materials as texts that have not been produced or scripted for the purpose of language teaching but are recordings of natural speech found in real-life situations. Non-authentic materials might be specifically created for teaching purposes, rather than being real-life recordings or natural conversations (Maley & Tomlinson, 2017). They are often used in language learning settings to provide learners with controlled and simplified language input that suits their current level of proficiency, and with regard to spoken language, this type of language may be less efficient.

The use of authentic materials in ESL/ EFL listening instruction is considered by many researchers an essential component of effective language learning, since they provide learners with exposure to real-world language use, which is important for developing their understanding of how native speakers communicate. Using authentic materials like videos, podcasts, or natural conversations also helps learners become more fluent and accurate listeners. These materials present language in its natural context, allowing learners to experience how it is used in real-life situations. "The argument is quite simply that if the goal of teaching is to equip students to deal ultimately with the authentic language of the real world, they should be given opportunities to cope with this in the classroom" (Hedge, 2000, p. 76).

The studies also reflect two different views on the use of materials in ESL/ EFL context, there are two viewpoints on the matter. The first view argues that learners need to be exposed to authentic, unscripted language in order to develop their listening skills. The second view argues that prior to listening to authentic material learners should be given training and practice in specific listening techniques and strategies. "One side argues that simplification and contrivance can facilitate learning; the other side argues that they can lead to faulty learning and that they deny the learners opportunities for informal learning and the development of self-esteem" (Tomlinson, 2003, p. 5). It is clear that Tomlinson (2003) opts for equal perspective and adds that engaging with authentic texts is necessary for developing communication and strategic skills. Additionally, he suggests that for difficult language features, it may be helpful to use examples that are tailored to address specific language features or difficulties that learners may encounter.

Mendelsohn (2006) suggests that while exposure to authentic material is important, it should come after learners have been given training and support in how to listen effectively. The needs and proficiency levels of learners should also be taken into consideration when deciding how much authentic material to incorporate in language classes.

Brown's (2011) view is more moderate, he claims that though the materials created for the classroom are not intended to resemble genuine authentic materials, they may have a few authentic features; but their main purpose is not to replicate real-world situations. However, this inauthenticity does not diminish their value in terms of pedagogy - they can still be effective for teaching and learning purposes.

Vandergrift & Goh (2012) argue that while authentic materials, which contain natural speech, can provide valuable learning opportunities for language learners, they can also present challenges. They propose the use of scripted or "semi-authentic" materials. These materials incorporate some degree of authenticity by including qualities of natural speech, such as normal speech rate, fillers, and repetitions. They also provide learners with a more manageable and structured learning experience. Thus, Vandergrift & Goh (2009) suggest the use of a combination of real-life materials and slightly adapted materials to help language learners in listening. This approach exposes learners to natural speech while also providing support and structure to help them understand and cope with its challenges.

However, Maley & Tomlinson (2017), argue that many materials including written or spoken texts cannot be considered authentic. This is because the language used in these texts is purposely constructed in a way that aids learners in learning the language. The reasoning often given for this approach is that simplifying and manipulating the language allows the learner to concentrate on a specific language feature that is repeated, thereby improving their chances of learning it effectively. Although these texts may not reflect actual language use, they are intended to enhance the learner's learning opportunities. However, according to Tomlinson and Masuhara (2017, p. 31), "this contradicts what is known about how languages are acquired and does not prepare them for the reality of language use outside the classroom."

There is no doubt that authentic materials can provide meaningful exposure to language in use, which is necessary for language acquisition. These materials can also motivate learners, contribute to the development of communicative competencies, and foster positive attitudes towards learning the language (Field, 2008; Maley & Tomlinson, 2017; Vandergrift & Goh, 2012). However, for authentic texts to be effective, they need to be relevant and engaging for learners who should be exposed to a variety of genres and text types (Maley & Tomlinson, 2017).

Cauldwell (2018) also advocates the use of authentic listening materials and suggests that "the language model that needs to serve as a basis for L2 listening instruction should incorporate the wildness, messiness and unpredictability of spontaneous speech" (p. 352). Thus, when teaching listening skills in a second language (L2), the language model used as a foundation should reflect the natural characteristics of spontaneous speech because instruction should expose learners to the real-life variations and complexities of how language is actually used in everyday conversations, rather than simplified and well-articulated speech.

In summary, the issue of inadequate teaching of listening skills has been extensively discussed by researchers. They argue that traditional methods, which primarily involve playing audio material and asking comprehension questions, are ineffective and are closer to testing rather than teaching. As a result, there has been a shift in recent years towards new approaches that prioritize explicit listening instruction in bottom-up skills,

metacognitive strategies, and accurate recognition of words and grammar. These aspects are discussed below.

2.10 Explicit Instruction in ESL/ EFL Listening

Rost (2020, p. 265) writes that "There is a need for explicit listening instruction at all levels of education". He defines listening instruction as a "pedagogic plan that focuses on four goals" (Rost, 2006, p. 49). These goals are: 1) enhancing learners' understanding of spoken language; 2) improving the effectiveness of learners' listening skills; 3) cultivating strategies for better comprehension of spoken discourse; 4) and fostering active engagement in face-to-face communication.

In an earlier publication (Rost 2006), he stated that two factors have contributed to the improvement of listening instruction in ESL and EFL learning. Firstly, there has been a better understanding of oral communication and how listeners perceive and comprehend information due to research in this area. Secondly, advances in communicative language learning techniques and technology have provided improved access to a wider range of spoken language resources.

The aim of explicit instruction in ESL/ EFL listening is to help learners become better listeners, capable of using their linguistic and non-linguistic abilities to interact, understand, interpret, and respond more extensively and proficiently (Rost, 2006). More recently, he stressed that a lack or deficit in listening skills instruction may lead to many students struggling with oral communication and literacy development. He wrote, "Educational research has consistently shown that many students fall behind in oral communication and literacy development because of a lack of listening skills" (Rost 2020, p. 265).

Accordingly, enhancing learners' listening skills is a challenging task that requires a variety of teaching strategies. Ultimately, the goal is for learners to use their language and other skills effectively when listening and responding to others. Recent literature on listening instruction has emphasized the importance of teaching listening skills explicitly, as it contributes to overall language proficiency. By "explicitly," is meant to focus on bottom-up skills such as pronunciation skills, one of the most essential listening comprehension skills. This will help students notice the characteristic of the spoken

language, which is a crucial element for language acquisition. Thus, Wilson (2003, as cited in Levis, 2018) proposes that explicitly focusing on bottom-up processes, which primarily involve phonetic aspects, can enhance the ability to notice features in L2 input, which can ultimately lead to an improvement in overall listening comprehension skills.

Schmidt (1990, 1995, 2001) is the first to introduce the concept of 'noticing' in second language acquisition in the 1990's. He suggests that learners should actively pay attention to specific aspects of the language they are exposed to in order to incorporate the language structures into their own knowledge and understanding. Schmidt (1990) explains that learners need to consciously notice and pay attention to specific linguistic features or patterns in the input in order to effectively acquire them. Ellis (1997, 2009) also highlights the significance of consciousness and noticing in language learning. He suggests that learners should deliberately and actively pay attention to language features in order to enhance their acquisition process.

In summary, researchers have always called for explicit listening instruction to improve learners' listening skills. Many research studies have been conducted using multiple approaches to listening instruction that integrate authentic materials, interactive activities task-based instruction, metacognitive strategies, and technology-based resources, and bottom-up and top-down processing, in particular pronunciation instruction (which will be discussed in the following section). The aim is to find effective ways and strategies in order to improve ESL/ EFL learners' listening ability.

1.10.1 Pronunciation Instruction for Enhancing Listening Skills

Although pronunciation instruction is critical for improving listening skills, it has not always been adequately addressed. According to Caulwell (2018, p. 430), there is a close connection between listening and pronunciation which is supported by theories of perception, teacher training axioms, and textbook materials. However, both skills have received less attention in discussions about English language teaching. Research has shown that teachers tend to avoid teaching pronunciation and may not directly engage with the sound aspects of English when teaching listening. Both listening and pronunciation have been referred to as the "Cinderella" skills of language instruction,

indicating that they have often been overlooked or undervalued compared to other language skills.

According to Celce-Murcia et al. (2010), the goal of teachers when it comes to teaching listening, should be to help learners understand fast, spontaneous, and authentic speech: "Our goal as teachers of listening is to help our learners understand fast, messy, authentic speech" (p. 370). The authors caution that there is a significant difference between the language that learners are encouraged to speak and the language they need to comprehend. They emphasize that the spoken language learners need to understand is much more diverse and unpredictable compared to what they need to produce in order to be understood by others. This implies that learners may need to comprehend a wide range of linguistic variations and real-life speech patterns, which can be more challenging than simply producing intelligible speech.

But it seems that linguistic variations and natural speech patterns are not easy to teach. Shockey (2011) notes that "English teachers shy away from teaching 'sloppy' pronunciation and hence aim for a style which is overly articulated. But in doing so, they avoid exposing students to exactly the style they will need to deal with in everyday conversations" (p29). As a result, teachers prioritize clear and overly articulated pronunciation, neglecting the natural style that students will encounter in daily speech, and students may not be adequately prepared to understand and communicate with native English speakers in casual or informal settings if they are only exposed to overly precise pronunciation in their lessons. According to the author, these learners' performance in understanding casual English is bound to be considerably lower compared to those who have much exposure to it. Shockey (2011, p. 29) adds: "This could be traced to lack of practice, but is arguably also related to the type of language they have as a model when learning English." It is clear that if learners have primarily been exposed to formal or non-casual English, they may struggle to understand casual English due to limited exposure and familiarity with its unique features.

Many studies have examined the effectiveness of pronunciation instruction in improving learners' listening skills in different learning and teaching contexts. In a study conducted by Kissling (2018) on learners of Spanish whose native language was English, the impact of teaching pronunciation on improving listening skills in language classrooms

was investigated. The findings indicated that instruction in Spanish pronunciation can enhance learners' ability to process speech effectively. The study involved 116 beginner learners of Spanish as a foreign language. The experimental groups received short pronunciation instruction lessons focusing on either individual sounds (segmental features) or stress and intonation (suprasegmental features). These lessons were followed by either practice focused on speaking (production-focused) or listening (perception-focused). The learners' bottom-up processing skills were assessed with a task where they had to write down dictated sentences. The results revealed that learners who Received Pronunciation instruction on suprasegmental features followed by perception-focused practice demonstrated improved intelligibility of the target language compared to the control group. On the other hand, learners who received pronunciation instruction on segmental features followed by production-focused practice found the target language speech more understandable. These findings highlight the effectiveness of pronunciation instruction in improving listening skills, even with limited instructional time. To enhance listening abilities, it is recommended to include a variety of features and practice types in pronunciation instruction. Although this study involved learning / teaching Spanish as L2, the findings are quite insightful and could be applied to the teaching of ESL/ EFL pronunciation to L2 learners of English to improve their listening comprehension skills.

On-Soon's (2019) study aimed to investigate the relationship between suprasegmental production instruction and improvement in Korean EFL learners' listening comprehension scores. It also aimed to examine how accurate production of suprasegmentals relates to learners' ability to produce understandable L2 speech. Thirty-two EFL learners participated in a quasi-experimental study where they received training in English suprasegmental features for one month. They were tested on their listening comprehension skills, suprasegmental production, and ability to describe pictures within a set time. The results showed a significant connection between accurate suprasegmental production and improvement in listening comprehension, as well as a strong correlation between accurate suprasegmental production and speaking performance. This study highlights the importance of incorporating suprasegmental instruction in both listening and speaking classes. On-Soon's research highlights the importance of suprasegmental production in improving listening comprehension among Korean EFL learners. Similarly, the present study on connected speech processes explores how teaching specific aspects

like assimilation and linking can enhance listening skills among Algerian EFL students, contributing to a deeper understanding of spoken English.

Dao et al.'s (2020) study examined how pronunciation instruction can affect L2 listening comprehension. The participants were 72 intermediate Vietnamese EFL university learners who were divided into two groups. The pronunciation group (n = 35) received seven 45-minute sessions of pronunciation instruction focused on both segmental and suprasegmental aspects of English. The control group (n = 37) did not receive any pronunciation instruction. To assess the impact of the instruction, the researchers used weekly reflections, a questionnaire, and focus group interviews to gather learners' perceptions. The results revealed that there was no significant difference in the immediate listening post-test scores between the two groups after the first two sessions, which focused on syllables and consonants/vowels. However, the pronunciation group outperformed the control group after three more sessions, which targeted word stress, thought groups, and sentence focus. These differences disappeared in subsequent immediate and delayed post-tests. The self-report data showed that learners had positive perceptions of the usefulness of the pronunciation instruction and how it contributed to their improvement in listening comprehension. While Dao et al.'s study examines the impact of comprehensive pronunciation instruction on L2 listening comprehension among Vietnamese learners, this study on connected speech processes focuses on specific phonological phenomena to enhance perceptual accuracy and listening comprehension among Algerian EFL students, offering a targeted approach to pronunciation instruction.

Yenkimaleki et al. (2022) conducted a study in Iran that compared various pronunciation instruction approaches to enhance listening comprehension skills in EFL learners. The study included six groups of 20 intermediate EFL learners from an Iranian university, using a pre-test post-test design. The control group focused solely on listening to and discussing authentic English audio recordings and movies, without any specific pronunciation instruction. Four experimental groups received additional instruction focused on either segmental or suprasegmental features of pronunciation with practice on either production or perception. The sixth experimental group received holistic pronunciation instruction, which integrated both production and perception activities. This approach aimed to develop a comprehensive understanding and application of

pronunciation skills in context. Longman's TOEFL English proficiency test assessed the participants' listening comprehension abilities before, immediately after, and at a delayed post-test phase. The results indicated that the group receiving holistic pronunciation instruction demonstrated the most significant improvement in listening comprehension compared to groups receiving separate segmental or suprasegmental training.

Yenkimaleki et al.'s (2022) study focused on holistic pronunciation instruction, integrating both production and perception activities. In contrast, this study specifically targeted teaching connected speech processes like assimilation, linking, and reduced forms to enhance perceptual accuracy and comprehension in Algerian EFL students.. Combining these methods in EFL teaching could be a useful way to improve students' listening abilities.

To conclude, the aforementioned studies have shown that pronunciation instruction significantly improves learners' listening skills, particularly when incorporating both segmental and suprasegmental features. Practice types that focus on both perception and production are recommended. These studies underscore the importance of pronunciation instruction, with learners perceiving it as beneficial and crucial for enhancing listening comprehension in EFL education. While these studies contribute to understanding pronunciation instruction and its impact on listening skills, the present study focuses on connected speech processes and listening comprehension in an EFL context of higher education.

2.10.2 Studies on Explicit Instruction of Connected Speech for Improving Listening Skills

A number of researchers (Avery & Ehrlich, 1992; Brown 1990; Brown & Crowther, 2023; Field, 2003, 2008; Kelly, 2000; Levis, 2018; Nation & Newton, 2009; Roach, 1991; Vandergrift, 2008; Vandergrift & Goh, 2012) highlight the importance of explicit instruction on connected speech processes for students to understand spoken language better. Such instruction may help them understand the complexities of natural speech, improve listening comprehension, and communicate effectively in real-life situations. According to Field (2003, 2008) instruction on connected speech processes helps EFL students develop automaticity in processing listening skills; thus meaning they can

effortlessly understand and interpret spoken language. Developing automaticity in connected speech allows learners to focus on higher-level listening tasks like understanding main ideas and following conversations.

For Goh & Wallace (2018), to improve learners' understanding and interpretation of language, teachers can use different strategies in the classroom. These include exercises to recognize specific words and phrases, activities to understand language patterns, and conversations to practice comprehension. Teaching decoding strategies, such as focusing on key words and teaching reduced forms, can help learners improve their listening skills. Explicit instruction in decoding, along with language-oriented activities, like dictation exercises, partial dictation, and counting words, can effectively support the development of listening skills. These activities can be used alongside explicit instruction or on their own to implicitly enhance listening skills. Overall, these strategies and activities can enhance learners' ability to comprehend spoken language.

However, few investigations have explored the impact of teaching connected speech for improving listening comprehension in ESL/EFL learners. These few studies conducted on connected speech processes point out to the paucity of research as well as the difficulty most ESL and EFL learners encounter when listening to natural spoken English. In their investigations, the researchers either focused on only one or two aspects of connected speech, such as Baghrahi et al. (2014), Gokgoz-Kurt (2016), Alameen (2014), and Cho (2019); or targeted all the processes, such as Brown and Hilferty (1986), Ahmadian & Matour (2014), Shimazaki (2021), Rahimi & Chalak (2017), Omar & Pilus (2022), and Zhong and Chen (2023).

For instance, Brown and Hilferty (1986) investigated the effect of teaching reduced forms, for improving listening comprehension among EFL students in the People's Republic of China. The experiment was carried on thirty-two students randomly divided into two groups: the treatment group, consisting of 16 participants, who received ten minutes of instruction on reduced forms daily for four weeks, and the control group, also with 16 participants, who received lessons on minimal pairs. To compare the performance of the two groups, three measures of listening comprehension were used to pretest and posttest students, a grammar test, a norm-referenced multiple choice listening text and reduced forms dictations. The results showed that the experimental group performed

better than the control group in all measurements. These results indicate that teaching reduced forms does aid listening comprehension. Similarly to the present study, Brown and Hilferty focused on teaching connected speech features (reduced forms) to improve EFL listening comprehension. However, their study involved fewer participants (32 Chinese students) and had a shorter duration (four weeks) in contrast to this study, which involved 108 Algerian students and lasted six months.

Baghrahi et al. (2014) also examined the impact of teaching assimilation and elision on 42 Iranian EFL high school learners. The participants were divided into experimental and control groups, with each group consisting of 21 students. While both groups were exposed to the same material to enhance their listening comprehension, the experimental group received six weeks of instruction on assimilation and elision. The findings indicated a noteworthy difference in the average scores of the dictation test between the two groups, suggesting that the teaching of assimilation and elision positively enhanced the listening comprehension skills of the experimental group. Baghrahi et al. examined assimilation and elision effects on listening comprehension, similar to the focus on connected speech in this study. They conducted their research with 42 Iranian high school learners over six weeks, while the current study involves a larger sample and longer period, offering more comprehensive data on Algerian students.

Two other studies were conducted in the United States of America context, Alameen (2014) and Gokgoz-Kurt (2016). Alameen (2014) investigated the effectiveness of two different methods, audio-visual feedback and audio-only feedback, in teaching linking to non-native speakers of English. More specifically, her study aimed to determine which method is more effective in improving learners' perception and production of consonant-to-vowel linking. The study also examined whether the improvements made during the training lasted long-term and if they could be applied in new situations. It also investigated how the frequency of words affected the ability to link words. The participants of this study were ESL students at Iowa State University in the United States. They came from various linguistic and cultural backgrounds, including Chinese, Korean, Malay, Spanish, Hindi, Portuguese, Cantonese, and Arabic. There were 45 participants in total, with an equal number in each of the three groups (i.e. 15 learners per group): control, audio-only, and audio-visual. The study found that both types of training were

effective in improving linking perceptually and productively, but the audio-visual training was more effective and received more positive feedback from learners. Alameen's study compared audio-visual and audio-only feedback methods for teaching linking, showing both were effective, while the present study investigates a broader range of connected speech processes and focuses specifically on perceptual accuracy and listening comprehension.

Gokgoz-Kurt (2016) investigated the effects of online training on the role of attention control in improving second language learners' perception of English palatalisation, a process of assimilation occurring across word boundaries. The study involved 58 non-native English speakers with different language backgrounds and proficiency levels. They studied English as a second language in the ESL intensive program hosted at the University of South Carolina, in the United States, and received three weeks of online training on the most commonly used English palatalisation forms. The results showed that the learners who received the training performed better on a perception test compared to those who did not receive any training. The study also found a significant relationship between the learners' ability to pay attention and their ability to learn palatalisation in connected speech. Gokgoz-Kurt studied online training on palatalization, highlighting the role of attention control. Unlike this study, which emphasizes connected speech through face-to-face instruction and covers a broader range of processes tailored to Algerian EFL learners, Gokgoz-Kurt's research focused specifically on online training for English palatalization.

Another study conducted by Ahmadian & Matour (2014) examined the potential effects of teaching connected speech features on the listening comprehension of Iranian English language learners. The study involved forty adult female Persian speakers aged 18-30, who were learning English. The participants were divided into two groups - an experimental group and a control group. The experimental group received explicit instructions on connected speech features, while the control group followed the regular instructions provided by their institute. Pre- and post-tests were conducted using tests including dictation and cloze dictation tests as well as listening comprehension tests. The scores of the participants on the pre- and post-tests were compared using paired samples t-tests and independent samples t-tests. The results showed that the experimental group

performed better than the control group, suggesting that explicit instruction on connected speech features can help improve the listening comprehension skills of EFL learners. The implications of these findings for teaching listening comprehension are also discussed. Ahmadian & Matour's research on connected speech features in Iranian learners aligns with my study's focus. However, my study includes a more extensive participant pool and additional teacher feedback, offering a more comprehensive analysis. Ahmadian & Matour's research on connected speech features in Iranian learners aligns with the focus of this study. However, this study includes a larger group of participants and additional teacher feedback, offering a more comprehensive analysis.

Rahimi & Chalak (2017) investigated the effects of teaching explicit instruction of connected speech on Iranian EFL learners' listening comprehension. They also investigated learners' attitudes towards this kind of training. Accordingly, fifty-two Iranian EFL learners were given explicit instruction of connected speech features for five weeks. Listening comprehension tests and dictation tests were used before and after the treatment to determine if such instruction enhanced listening comprehension, and also, to determine whether the participants were able to recognize individual words in connected speech. The subjects were asked to complete a questionnaire after the treatment in order to determine their attitudes toward the instruction. The results of the study showed significant improvement in learners' ability to recognize individual words in connected speech through the instruction of connected speech feature. On the question of listening comprehension, the instruction of connected speech features significantly enhanced listening comprehension. The learners expressed that they were able to recognize English prosody including connected speech features better after the instruction. They had positive attitude toward this instruction. This study clearly presented the importance and usefulness of teaching connected speech features. Rahimi & Chalak found explicit instruction of connected speech beneficial, similar to the findings of this study. While this study involved a larger sample size of 108 Algerian EFL students and a longer intervention period, both studies support the effectiveness of teaching connected speech processes in enhancing listening comprehension.

Cho's (2019) study examined the impact of teaching linking in a Korean EFL listening class through phonetic analysis and surveys. The study took place over 8 weeks

in a university TOEIC listening class with 40 students. The results showed that students accurately recognized the position of linking in 75% of cases and successfully executed linking in 74% of cases. The most common errors were the insertion of a pause, glottalization, vowel insertion, and consonant release. Pre- and post-surveys were used to assess the effects on students' listening proficiency. The comparison of the survey responses before and after the teaching period showed that students' awareness of linking and their perception of pronunciation improved significantly. Cho's study on teaching linking in Korean EFL classes showed improved pronunciation perception, similar to the results on connected speech in this study. This study, however, includes a wider range of connected speech features and a larger Algerian sample.

Shimazaki's (2021) study also discussed whether the instruction of connected speech features could affect EFL learners' listening skills. In his study, a total of 82 Japanese public university students were given explicit instruction of connected speech features for four weeks. Dictation tests and listening comprehension tests were conducted before and after the treatment to determine whether the participants were able to recognize individual words in connected speech, and to determine if the instruction of connected speech features enhanced listening comprehension. The participants were also asked to complete two questionnaires before and after the treatment, in order to discover whether and how the students' listening strategies and attitudes toward prosody changed through the instruction. Four major findings were obtained. Firstly, the results showed significant improvement in students' ability to recognize individual words in connected speech through the instruction of connected speech features. Secondly, the instruction of connected speech features partially enhanced listening comprehension. Thirdly, some participants slightly modified their listening strategies in such ways as reducing reliance on the first language and planning ahead for listening. Finally, students tended to feel that they were able to recognize English prosody including connected speech features better after the instruction. Shimazaki's investigation of connected speech instruction improving Japanese EFL learners' listening skills aligns with this research. However, this study involves a larger participant group and a longer intervention period, offering more in-depth insights.

Momen Omar & Pilus (2022) investigated the impact of explicit instruction on connected speech in reducing listening comprehension difficulties in EFL learners. The study involved 62 intermediate-level Libyan EFL learners aged 19 to 21, divided into treatment group and control group. The treatment group received explicit instruction on connected speech features for 12 weeks, while the control group did not receive any specific instruction. Both groups completed a questionnaire assessing their comprehension difficulties before and after the intervention. The questionnaire focused on three categories: speech recognition, parsing, and utilization. The results showed that the treatment group demonstrated a significant improvement in their reported comprehension problems, while the control group did not show any improvement. The differences between the treatment and control group were large, indicating the effectiveness of explicit connected speech instruction. These findings underscore the importance of including connected speech recognition in the EFL curriculum to enhance learners' listening comprehension skills. Momen Omar & Pilus investigated the impact of explicit instruction on connected speech to reduce listening comprehension difficulties in Libyan EFL learners. Their study involved a 12-week intervention with 62 intermediate-level learners. In contrast, this study with Algerian EFL students focuses on connected speech processes to enhance perceptual accuracy and listening comprehension over a longer duration with a larger participant group.

Zhong and Chen's (2023) study examined how explicit instruction in pronunciation enlarged learner's listening vocabulary. The study involved 115 EFL English learners who received ten weeks of explicit instruction on sounds and four pronunciation skills (reduction, elision, intrusion, and assimilation). The details of the instruction were explained and a pre-test and post-test were conducted using the Listening Vocabulary Levels Test. The results showed that after the explicit pronunciation instruction, there was a noticeable increase in the learners' listening vocabulary size and a significant difference between the scores of the two tests. The study concluded that explicit pronunciation instruction could effectively help students expand their listening vocabulary, particularly those with lower proficiency levels. The authors also highlighted that certain teachers lacked the necessary knowledge and skills to teach pronunciation effectively. Moreover, some teachers themselves struggled with pronunciation. They suggested that teachers lacking sufficient knowledge and skills for teaching pronunciation effectively received

training to enhance and improve their own pronunciation skills. Zhong and Chen examined the effects of explicit instruction in pronunciation on enlarging learners' listening vocabulary among 115 EFL English learners. Their study focused on specific pronunciation skills like reduction, elision, intrusion, and assimilation, demonstrating an increase in vocabulary size after ten weeks of instruction. Similarly, this study includes these specific pronunciation skills but also extends to broader connected speech processes to improve overall listening comprehension skills in Algerian EFL students.

In summary, while each study mentioned previously offers important insights on the advantages of explicit instruction in pronunciation and connected speech, this study stands out for its comprehensive investigation in connected speech processes and its potential to significantly impact listening comprehension skills among Algerian EFL students.

Conclusion

This chapter has examined the role of phonological awareness in enhancing ESL/ EFL listening comprehension. It has shed light on the critical role of phonological skills in decoding and comprehending spoken English, and it has highlighted the difficulties encountered by English learners in understanding spoken English. Additionally, it has outlined factors that may hinder listening comprehension, such as fast-paced speech, unfamiliar words, pronunciation difficulties, and limited contextual knowledge. The chapter has also shed light on the neglect of listening instruction in ESL/EFL classrooms and proposed a combination of authentic and adapted materials to enhance learners' listening skills. It has explored the notion that pronunciation instruction can improve listening skills in ESL/EFL. By addressing these challenges and incorporating effective teaching strategies, educators and practitioners can greatly enhance students' ability to comprehend and engage with spoken English. Prioritizing listening instruction in the curriculum is essential to ensure its proper attention and recognition in the field of ESL/EFL education. The next chapter is devoted to the methodology, providing a description of the research method and design used in the present study.

Chapter Three: Research Method and Design

Chapter Three: Research Method and Design

Introduction

The purpose of this chapter is to provide a comprehensive explanation of the methodology employed in the study. It aims to justify the selection of the research design, describe the characteristics of the participants involved, as well as the tools and procedures utilized for data collection. The study adopts a quasi-experimental design involving a two-group pretest-posttest design, where carefully chosen tasks were administered to both the experimental and control groups before and after the implementation of the treatment. This design allows for a comparative analysis of the groups' performance and the evaluation of the effectiveness of the treatment. To gather additional information, a post-test questionnaire was administered solely to the experimental group to assess their attitudes, opinions, and evaluations of the experiment. Simultaneously, a second questionnaire was administered to the teachers to gain insights into their perspectives and approaches towards foreign language listening instruction, particularly regarding connected speech processes. This dual questionnaire approach allows for a comprehensive understanding of the viewpoints of both students and teachers. Additionally, document analysis of the listening and phonetics syllabi was conducted to assess the existing educational materials and suggest improvements for teaching connected speech processes. The use of multiple data collection tools, including pretest and posttest measures, questionnaires to both students and teachers, and document analysis of the listening and phonetics syllabi, contributes to the robustness of the study. The application of triangulation in analyzing the results enhances the validity and reliability of the findings, providing a more comprehensive understanding of foreign language listening instruction. This chapter includes four sections. Section 3.1 is devoted to restating the research questions (as already stated in the General Introduction). Section 3.2 deals with description of the quasi-experimental research design. Section 3.3 describes the participants in the study, specifically detailing the students and teachers involved. Section 3.4 is devoted to the procedure of data collection, including the use of the three research instruments: questionnaires, tests, and description of the tasks, as well as document analysis of the listening and phonetics syllabi. Section 3.5 describes the data

collection procedure and discusses issues of validity and reliability. Finally, Section 3.6 details the procedure for data analysis.

3.1 Research Questions, Sub-questions and Hypotheses

The primary objective of this study is to examine the effect of teaching features of connected speech—specifically, assimilation, linking, elision, and reduced forms of function words—on the perceptual accuracy and listening comprehension of first-year undergraduate Algerian EFL students at the Teacher Training College of Bouzareah. The second objective is to investigate students' and teachers' attitudes toward connected speech processes, as outlined in the General Introduction. To achieve these goals, five research questions have been formulated. Two of these questions, along with their related sub-questions and hypotheses, focus on students' perceptions of connected speech processes and listening comprehension. The remaining questions explore both students' and teachers' perspectives and analyze the listening and speaking syllabi.

- **Research Question 1**

RQ1: Does perceptual training in connected speech processes lead to an improvement in EFL students' perceptual accuracy of these processes?

Research Question 1 assumes that Algerian EFL students struggle with perceiving connected speech processes, which hinders their listening comprehension. Perceptual training could improve their understanding, especially in assimilation, linking, elision, and reduced forms of function words. Based on this, the following hypotheses are formulated.

Hypotheses:

H_0: Perceptual training in connected speech processes does not lead to an improvement in students' perceptual accuracy of these processes.

H_1: Perceptual training in connected speech processes leads to an improvement in students' perceptual accuracy of these processes.

Research Question 1 has been divided into four sub-questions, each corresponding to one of the connected speech processes examined in this study.

Sub-question 1:

SQ1: Does perceptual training in assimilation lead to an improvement in EFL students' perceptual accuracy of this process?

Hypotheses:

H_0: Perceptual training in assimilation does not lead to an improvement in students' perceptual accuracy of this process.

H_1: Perceptual training in assimilation leads to an improvement in students' perceptual accuracy of this process.

Sub-question 2:

SQ2: Does perceptual training in linking lead to improvement in EFL students' perceptual accuracy of this process?

Hypotheses:

H_0: Perceptual training in linking does not lead to an improvement in students' perceptual accuracy of this process.

H_1: Perceptual training in linking leads to an improvement in students' perceptual accuracy of this process.

Sub-question 3:

SQ3: Does perceptual training in elision lead to an improvement in EFL students' perceptual accuracy of this process?

H_0: Perceptual training in elision does not lead to an improvement in students' perceptual accuracy of this process.

H_1: Perceptual training in elision leads to an improvement in students' perceptual accuracy of this process.

Sub-question 4:

SQ4: Does perceptual training in reduced forms of function words lead to improvement of EFL students' perceptual accuracy of this process?

Hypotheses:

H_0: Perceptual training in reduced forms of function words does not lead to an improvement in students' perceptual accuracy of this process.

H_1: Perceptual training in reduced forms of function words leads to an improvement in students' perceptual accuracy of this process.

- **Research Question 2**

RQ2: Does perceptual training in connected speech processes─assimilation, linking, elision, and reduced forms of function words─improve EFL students' listening comprehension?

Hypotheses:

H_0: Perceptual training in connected speech processes does not lead to an improvement in students' listening comprehension.

H_1: Perceptual training in connected speech processes leads to an improvement in students' listening comprehension.

Research Question 2 attempts to elicit data on the relationship between perceptual training in connected speech processes and listening comprehension.

- **Research Question 3**

RQ3: What are EFL students' attitudes toward explicit training on connected speech processes for improving listening in general, and connected speech learning and teaching in particular?

Research Question 3 aims to examine the impact of explicit training in connected speech processes on students' listening abilities, understanding of connected speech, and their responses to teaching methods. By exploring these aspects, the study seeks to gain

insights into students' experiences, perceptions, and attitudes regarding connected speech processes.

- **Research Question 4**

RQ4: What are Algerian EFL teachers' attitudes towards teaching listening in general and connected speech in particular?

Research Question 4 seeks to investigate Algerian EFL teachers' attitudes and beliefs about the significance of connected speech in understanding spoken English, as well as their familiarity with these processes. It examines both the general context of teaching listening skills and the specific focus on connected speech.

- **Research Question 5**

RQ5: How do the first-year listening and phonetics syllabi address connected speech processes?

Research Question 5 aims to assess how the first-year listening and phonetics syllabi incorporate connected speech processes and their effectiveness in preparing students for real-world listening.

3.2 Selecting the Research Design

This study employs a quasi-experimental design and seeks to determine the relationship between the independent variable, which is students' perceptual training of connected speech processes, and the dependent variable, which is students' outcomes on listening perception and listening comprehension. Besides collecting quantitative data, qualitative data will also be gathered through responses to open-ended questions in the questionnaires given to students and teachers, as well as through the document analysis of the first-year listening and phonetics syllabi.

The literature on experimental methodology suggests that in order to gain valuable insights and useful information from research studies on L2 listening, whether conducted on a small or large scale, using experimental or quasi-experimental methods, it is important to include pedagogical interventions (Cross and Vandergrift 2015). Therefore, a quasi experimental design, also known as naturally occurring groups design, or pretest-

posttest non-randomized control-group design, was employed in the study. McDonough & McDonough (1997) explain why, in some situations, conducting an experimental study is more convenient. They write:

> In certain circumstances an experiment is an attractive option, data-gathering itself need not involve a long, protracted period of time, the relationship between the data sets gathered, their numerical analysis, and the research question is decided in advance; the interpretation of the results depends on features of the experiment which are also decided in advance. (p. 155)

The authors highlight the advantages of carrying an experiment, such as the ability to obtain data efficiently and make specific decisions in advance regarding the research question, data analysis, and experimental design. An experiment emphasizes the importance of planning and specifying variables, tasks, participant numbers, and numerical analysis in order to generate precise and interpretable results.

A quasi-experimental design was chosen, which is similar to a true experimental design, since both of them investigate a possible cause-and-effect relationship between variables; that is, an independent variable that causes change in the dependent variable. Also both quasi-experimental and true experimental designs use comparison groups and pretest-posttest testing. The only difference between the two designs is that in a true experimental design, participants are randomly assigned to experimental and control groups, which is not the case for the present study, as is explained below.

Randomization of participants signifies that the experimental and control groups are equal on all important aspects except for the variable being investigated (Griffee, 2012). This type of design provides the highest level of confidence that the findings are due to the intervention and not to other factors (Lesnick et al., 2015). But randomization of subjects is not always possible. Although it is generally agreed that random assignment is the best way to ensure the internal validity of the research (Marczyk, et al. 2005); unfortunately, it is not always feasible for researchers to rearrange students into different groups or classes. So, most of them use intact group subjects, that is "subjects who have been grouped together for reasons other than the carrying out of an experiment" (Nunan 1992, p. 26). Subsequently, many researchers conduct their studies with the pre-existing groups to compare the outcomes between the experimental and control groups; thus, they make use of quasi experimental designs. This is what happened for the present study.

Nevertheless, quasi-experimental designs may ensure higher external validity than true experiments, because they involve real learning environments using real class groups instead of artificial laboratory conditions; they can also ensure higher internal validity than other non-experimental designs (Dörnyei 2007). For him, "It is generally accepted that properly designed and executed quasi-experimental studies yield scientifically credible results" (p. 118). In other words, a quasi-experimental design can still yield some useful insights into a cause-and-effect relationship between an independent variable and a dependent variable if it is well designed and if four critical factors are employed in a study (Lesnick et al., 2015). Making appropriate choice about these four factors or conditions allows control for confounding or extraneous variables. The factors are:

1. There are two groups, an experimental group that receives the treatment, and a control group that does not. The importance of having a control group is particularly crucial because it would show what would have happened without intervention. Moreover, in any study there are extraneous variables that might affect the relationship between students' scores and the treatment. These variables can be controlled and minimized by introducing a control group (Creswell, 2014; Kumar, 2011) whose sole function is "to quantify the impact of extraneous variables on the dependent variable" (Kumar 2011, p. 98).

2. There is a pretest that is given to both groups at the same time, before the intervention. The pretest aims to show baseline equivalence, i.e., that the two groups are similar prior to the intervention.

3. The only difference between the two groups is the treatment; and that there are not any other confounding factors.

4. The study uses appropriate statistical analysis to measure the outcomes for both groups at the end of the intervention.

The strength of quasi-experimental designs is that they are easy to set up, practical, not expensive, and sometimes they are the only feasible alternative; in addition to the fact that these designs are adaptable to real world context.

In addition to the quasi-experimental design, the study also explores students' attitude towards the training on connected speech processes, as well as teachers' perception of listening in general and teaching connected speech processes in particular.

3.3 Participants

This study includes not only student participants but also teacher participants. The aim is to examine the issue under study from two different perspectives, students and teachers.

3.3.1 Student Participants

Since it was not possible to assign students randomly into experimental and control groups, two intact groups of first year English degree students enrolled in the Teacher Training College at Bouzareah (ENSB) Algiers, took part in this study. The experimental group, consisting of fifty-four (54) students, received around 25-minute perceptual treatment sessions once a week for 19 weeks on the rules governing connected speech processes and the use of listening material that included these features. The control group consisting of fifty-four (54) students, on the other hand, did not receive any treatment on these features, but attended 'normal' listening comprehension courses.

The study could not be carried out before making sure that the students became familiar with phonetic symbols. Accordingly, extensive work was done on this basis 4 weeks before the experiment in order to enhance students' grasp of the phonetic symbols, which was essential for the study.

All the students were pre-service teachers of English as a foreign language. They were studying English either for four years to become middle school teachers of English, or for five years to become secondary school teachers of English. They had listening classes in their first two years only; and each listening session lasted two hours a week.

It is important to note that teaching connected speech processes is not included in the first year phonetics syllabus as appears in the description of first-year syllabus of phonetics (Chapter Three, Section 3.4). Students typically come across these processes during their third year of the English degree program. Additionally, the time allocated to

teaching these aspects is very limited—typically six hours per year—with minimal or no opportunity for listening practice.

Accordingly, first year students were chosen because they did not study aspects of connected speech beforehand, i.e. they had never been taught these features of pronunciation; and teaching them these processes for the first time would give more validity to the results of the experiment.

3.3.2 Teacher Participants

Including teachers as participants in the present study is as important as including students as participants since one of its aims is to find out about Algerian teachers' attitudes, opinions, and their experiences of teaching listening in general and teaching connected speech processes in particular. Therefore, a questionnaire targeting almost the whole population of teachers of listening at the Teachers Training College (ENSB) was administered. The initial number of the participants was ten but only seven teachers responded to the questionnaire, five females and two males. Five participants are assistant teachers, one is an assistant lecturer, and one is a professor. Their listening teaching experience ranges from 3 to 11 years. Although the sample size for the study was small, a questionnaire, rather than an interview, was chosen as the data collection tool.

Brown (2001, p. 77) writes that "The choice that must be made as to whether to use an interview or a questionnaire will depend on the purposes and constraints of a particular survey projects". Indeed, a questionnaire was chosen as the research tool over an interview due to practical considerations. First, using a questionnaire avoids the issue of scheduling interviews (Brown 2001, p. 76), because it is not always possible to ensure the availability of teachers who often complain of being busy and short of time. Second, unlike interviews which comprise only open-ended questions, the questionnaires designed for this study incorporate both open-ended and close-ended questions to collect data. In this way, quantitative and qualitative data was obtained. Third, one of the advantages of using a questionnaire is that participants can fill in a questionnaire "in their own time, at their own pace, and fit it into their own schedule.... One implication of this time factor is that the respondents can take as much time as they like" (Brown 2001, p. 77). Thus, the questionnaire allowed participants sufficient time to think before answering and to write

down exactly what they wanted using their own words. But an interview would have allowed lesser time to think before responding, and put pressure on the respondents for immediate response. Therefore, using a questionnaire with the small number of teacher participants was believed to be the best method to gather a great amount of data and to collect as much as possible information from the participants.

3.4 Description and Administration of the Experimental Material

The present study has the advantage of using a variety of tools all of which are meant to examine the learning and teaching of connected speech processes and their effect on student listening performance. A pre-test questionnaire, pre- and post-tests, and a post-test questionnaire were all administered to the student participants. In addition, a questionnaire was handed out to the ten teachers of listening. It is important to mention that all the questionnaires designed were based on items from the existing literature. Finally, the document analysis of the first-year listening and phonetics syllabi was conducted to determine whether connected speech processes are incorporated and to assess their possible effectiveness in preparing students for real-world listening. This was to allow gathering the necessary data and obtaining insights into the research questions.

This section presents the objective, description, and administration of the research tools. These tools are presented in the order of administration in the study, starting from the questionnaires, then the tests and the tasks, and finally document analysis of the first-year listening and phonetics syllabi. Furthermore, all the research instruments were piloted before administration. The next sub-section describes the piloting procedure.

3.4.1 Piloting the Research Instruments

Many researchers point out to the importance of piloting the research instruments of a study (Harper et al., 2013; Taylor et al. 2006; Wilkinson & Birmingham, 2003). For Harper et al., 2013, one way to improve the quality of a research study is to pilot its research instruments; and the best way to do this is to apply these instruments on a small group of participants. Ideally, these instruments should be tested under conditions that are as much as possible identical to those of the main study. “The use of colleagues and friends is certainly better than having no pilot test, but respondents similar to those in the planned field work should be the aim” (Taylor et al. 2006, p. 99).

There are some reasons why a researcher should pilot his/her research instruments. First, it allows gathering the most useful information from the majority of the participants. Second, it helps to eliminate ambiguous questions and to generate useful feedback by checking that the participants understood the tasks assigned to them. Third, it provides important information about the things to be changed, and therefore to be improved. Finally, it allows for verifying that the research instruments employed in the study meet the researcher's objectives

Thus, all the research instruments used in the present study were piloted on participants similar to those involved in the present study. The instruments administered to the student participants were conducted to thirty first year students one year before the main study took place. The purpose was to check that the respondents understood the tasks assigned to them and to ensure that all the questions were clear to them.

Concerning the teachers' questionnaire, it was piloted with four teachers (three teachers of writing, one teacher of listening), as well as the researcher's supervisor. Taking into account all their feedback, the questionnaire was rewritten and sent to ten teachers of listening.

3.4.2 Description of the Pre-Test Questionnaire to Students

a. Objective

Before administering the pretest, a questionnaire was distributed to the students in order to gather data about their background and previous learning experiences, specifically their listening and pronunciation experiences. This questionnaire was used to demonstrate that the control group had the same characteristics as the experimental group prior to the intervention in terms of baseline characteristics: such as age, English learning years and experiences. The aim was to show that the two groups were homogeneous, because "the more similar they are in personal characteristics or attributes, the more these characteristics or attributes are controlled in the experiment" (Creswell 2014, p. 300).

b. Description

The pre-test questionnaire begins with a very short introduction, explaining the purpose of the study and ensuring anonymity to the respondents. It also consists of two

sections: section one is about students' background information such as gender, age, number of years spent studying English, whether the respondents lived in an English speaking country, and whether they have hearing problems. The last two questions are meant to discard the students who lived in an English speaking country or who have hearing problems in order not to influence the results of this study.

Section two is about the participants' language information. The questions target the listening materials the students listen to outside the classroom, the difficulties they encounter when listening to spoken English; and the elements of the English pronunciation they studied before coming to ENSB, mainly the modification of sounds at word boundaries.

All the questions are closed-ended items. According to Dörnyei (2003), the major advantage of closed-ended questions is that their coding and tabulation is straightforward and leaves no room for rater subjectivity. The questionnaire includes yes/no questions such as questions 4 and 6, Likert scales such as questions 8 and 9, and checklists such as questions 7, 10, 11, and 12; thus, the respondents were provided with ready-made response options to choose from (see Appendix A). Stated this way, the questions were meant to be understood easily and answered quickly, and be more manageable at the analysis stage.

3.4.3. Description of the Pre-Test and Post-Test Perceptual Tasks

Cross and Vandergrift (2015, p. 88) state, "If a study is experimental or quasi-experimental, it is essential to use a pre-test to determine if the control group and the experimental groups are of similar ability before the intervention."

Since the present study is a quasi-experiment, the implementation of a pre-test is necessary to find out whether the control group and the experimental group are identical or not on the variable under study, which is instruction on connected speech processes to improve students' perception and listening comprehension. The same test administration procedures and the same tests were employed for both groups, in order to make sure that "personal abilities and test conditions are the same for both groups" (Creswell 2014, p. 295). Accordingly, the tests comprise two types of activities, perceptual activities (see Appendix B) and listening comprehension activities (see Appendix C).

Perceptual activities consist of four exercises: exercise one deals with assimilation. It includes two tasks: sound identification and word identification. Exercise two deals with linking; exercise three is about elision; and exercise four is about the reduced forms of function words, all of which aim to examine students' ability to identify words whose boundaries undergo one of these processes. These tasks are described in the coming section.

3.4.3.1 Assimilation

The assimilation task includes two parts: part one is a sound identification task, and part two is a word identification task. The two tasks are described below.

✶ **Part One: Sound Identification Task**

- **Objective**

The aim of the activity is to find out whether the students are able to perceive the sounds modified because of assimilation at word boundaries and therefore are more likely to identify assimilated words. Based on the use of transcription, the students are required to listen and identify the sounds, more precisely, the consonants that undergo assimilation, and then write their phonetic symbols.

- **Description**

The exercise consists of ten sentences, each demonstrating how the final consonants of the first word are modified due to the influence of the following word through assimilation. Table 3.1 below illustrates the modifications of the ten items occurring at word boundaries.

Table 3.1

Modification of Sounds of the Assimilated Words at Word Boundary (Part One)

Sentences	Change at word boundary	Phonemic transcription	Phonetic transcription
1	good points	/gʊd pɔɪnts/	[gʊ**b**pɔɪnts]
2	in Britain	/ɪn brɪtən/	[ɪ**m**brɪtn]
3	open prison	/əʊpən prɪzən/	[əʊp**m**prɪzn]
4	common ground	/kɒmən graʊnd/	[kɒmə**ŋ**graʊnd]
5	good guys	/gʊd gaɪz/	[gʊ**g**gaɪz]
6	can carry	/kæn kærɪ/	[kə**ŋ**kærɪ]
7	could be	/kʊd bɪ/	[kə**b**bɪ]
8	want more	/wɒnt mɔ:/	[wɒ**mp**mɔ:]
9	can't bear	/kɑ:nt beə/	[kɑ:**mp**beə]
10	can be	/kæn bɪ/	[kə**m**bɪ]

Note. Table 3.1 includes ten sentences adapted from *English for Academic Study: Pronunciation Study Book* (Smith & Margolis, 2012) and *Authentic Listening Resource Pack: Bridging the Gap to Real-World Listening* (Marks & Bowen, 2012).

As Table 3.1 shows, the items are presented in their phonemic transcription, that is the way they are pronounced in careful speech, and in their phonetic transcription, that is the way they are pronounced in real speech. All the items are examples of regressive assimilation, i.e., the final consonant of the first word is influenced by the initial consonant of the second word. The sound /d/ becomes **[b]** when followed by words that start with /b/, /p/. The sound /n/ becomes **[m]** when followed by words that start with /b/, /p/. The sound /n/ becomes **[ŋ]** when followed by words that start with /k/, /g/. The sound /nt/ becomes **[mp]** when followed by words that start with /m/, /b/. Therefore, the total number of items that the students were required to find out was ten; every item was counted as having one point in score.

✶ **Part Two: Word Identification Task**

- **Objective**

The cloze dictation task aims to find out whether the students are able to recognize words whose boundaries are modified because of the process of assimilation. The students were asked to fill in the blanks in the sentences by writing what they heard from the recording. Each blank includes two words, the assimilated word and the following word. It was important to find out whether the students were able to identify not only the words that underwent assimilation but also the words that caused their modification, as shown in Table 3.2 below.

- **Description**

The cloze dictation test consists of ten sentences. Table 3.2 below shows the modifications of the 20 items that occurred at word boundary due to assimilation. The items are written in their phonemic transcription and phonetic transcription which shows how these assimilated words are pronounced in real speech. There are examples of coalescent assimilation such as items 2, 9 and 10; the remaining items are examples of regressive assimilation. The total number of items that the students were required to find out was twenty, and every item was counted as having one point in score.

Table 3.2

Modification of Sounds of the Assimilated Words at Word Boundary (Part Two)

Sentences	Changes at word boundary	Phonemic transcription	Phonetic transcription	Types of assimilation
1	wet paint	/wet peɪnt/	[we**pp**eɪnt]	Regressive
2	as usual	/æz juːʒʊəl/	[æ**ʒj**uːʒʊəl]	Coalescent
3	did Brazil	/dɪd bræzɪl/	[dɪ**bb**ræzɪl]	Regressive
4	gone back	/gʌn bæk/	[gʌ**mb**æk]	Regressive
5	haven't paid	/hævnt peɪdə/	[hæv**mp**peɪdə]	Regressive
6	start by	/stɑːt baɪ/	[stɑː**pb**aɪ]	Regressive
7	white gate	/waɪt geɪt/	[waɪ**kg**eɪt]	Regressive
8	seat covers	/siːt kʌvəz/	[siː**kk**ʌvəz]	Regressive
9	but you	/bʌ tjuː/	[bə**ʧ**ə]	Coalescent
10	had yesterday	/hæd jestədeɪ/	[hə**ʤ**estədeɪ]	Coalescent

Note. The cloze dictation test consists of ten sentences adapted from *The Book of Pronunciation* (Marks & Bowen, 2012) and *Work on Your Accent* (Ashton & Shepherd, 2012).

3.4.3.2 Linking

- **Objective**

The cloze dictation exercise is meant to find out whether the students are able to identify words that are linked at word boundaries. The students are asked to fill in the blanks in the sentences by writing what they heard from the recording. All the words that are linked are taken into consideration.

- **Description**

The exercise includes eight sentences with gaps where words are linked at word boundaries. Table 3.3 illustrates how words are linked in careful speech versus real speech, highlighting the differences in pronunciation.

Table 3.3

Linking at Word Boundaries

N	Linking at word boundary	Phonemic transcription	Phonetic transcription
1	-my old uncle's -with us for Easter	-/maɪ əʊld ʌŋkl ɪz/ -/wɪð ʌs fɔ: i**ː**stə /	-[maɪ$^{(j)}$əʊld‿ʌŋkl‿z] -[wɪ**ð**‿**ʌ**s f**ɔː**$^{(r)}$i**ː**stə]
2	-I often eat an egg with a -of olives in	-/aɪ ɒfən i:t ən eg wɪð ə/ -/əv ɒlɪvz ɪn/	-[aɪ$^{(j)}$ɒfən‿i:t‿ən‿eg wɪð‿ə] -[əv‿ɒlɪvz‿ɪn]
3	-wrote to us -left out -new address	-/rəʊt tʊ ʌs/ -/left aʊt/ -/nju: ədres/	-[rəʊt‿tə$^{(w)}$əs] -[left‿aʊt] -[nju:$^{(w)}$ədres]
4	-like a bite to eat	-/laɪk ə baɪt tʊ i:t/	-[laɪk‿ə‿baɪt‿tʊ$^{(w)}$i:t]
5	-might earn	-/maɪt ə:n/	-[maɪt‿ə:n]
6	-called out the answer	-/kɔ:ld aʊt ði: ɑ:nsə /	-[kɔ:ld‿aʊt ðɪ$^{(j)}$ɑ:nsə]
7	-they're under	-/ðeɪ ɑ: ʌndə/	-[ðeɪ$^{(j)}$ə‿rʌndə]
8	-grab both of	-/ju: græb bəʊθ ɒv/	-[græb‿bəʊθ‿əv]

Note**.** The eight sentences in this exercise are adapted from *Test Your Pronunciation* (Vaughan-Rees, 2002) and *The Book of Pronunciation* (Marks & Bowen, 2012).

As shown in Table 3.3, the exercise covers various types of linking, with each gap illustrating word linking at word boundaries. These types include: linking consonants to vowels, linking consonants to consonants, linking identical consonants, and linking vowels to vowels. A total of forty items are included, with each item valued at one point in the scoring system.

3.4.3.3 Elision

- **Objective**

The dictation test aims to examine students' ability to identify words whose last consonants are elided because of the influence of the following consonants. The students were asked to write down the sentences they heard from the recording, and only the words whose sounds are elided at word boundaries are taken into account.

- **Description**

The exercise consists of ten Table 3.4 shows how sounds words are elided at word boundary. It shows the way the items are pronounced in their phonemic transcription, i.e. when pronounced carefully, and the way they are pronounced in phonetic transcription, i.e. when pronounced in real speech. Almost all the examples include either the sound /t/ or the sound /d/. The elision of the two consonants is very common in English, especially when they are preceded or followed by other consonants. In the example 4, 'sixth's thrown' two consonants are left out /**θs/** to become [sɪk**s****θ**rəʊn]; so whenever there is a cluster of consonants, i.e. two or more consonants, one or two consonants are elided to facilitate its articulation. In example 8, not only is the sound /d/ elided /len **m**i:/ but also causes the preceding sound /n/ to be assimilated to the following sound /m/ to become [le**mm**ɪ]. It is important to mention that only the target forms were corrected and scored. The total number of items that the students were required to find out is twenty, and every item was counted as having one point in score.

Table 3.4

Elision at Word Boundaries

Sentences	Elision at word boundary	Phonemic transcription	Phonetic transcription
1	first girl	/fəːs**t gə**ːl/	[fəː**sg**əːl]
2	reached Paris	/riːʧ**t p**ærɪs/	[riː**ʧp**ærɪs]
3	acts like	/ækt**s l**aɪk/	[æk**sl**aɪk]
4	sixth's thrown	/sɪks**θs θ**rəʊn/	[sɪk**sθ**rəʊn]
5	hold tight	/hɒl**d t**aɪt/	[hɒ**lt**aɪt]
6	kept quiet	/kep**t k**aɪət/	[ke**pk**aɪət]
7	slept badly	/slep**t b**ædlɪ/	[sle**pb**ædlɪ]
8	lend me	/len**d m**iː/	[le**mm**ɪ]
9	cold lunch	/kəʊl**d l**ʌnʧ/	[kəʊ**ll**ʌnʧ]
10	Just can't	/ʤʌs**t k**ɑːt/	[ʤʌ**sk**ɑːt]

Note**.** The ten sentences in the exercise were adopted from *How to Teach Pronunciation* (Kelly, 2000), *Pronunciation Practice Activities* (Hewings, 2004), *The Book of Pronunciation* (Marks & Bowen, 2012), and *Test Your Pronunciation* (Vaughan-Rees, 2002).

3.4.3.4 Reduced Forms of Function Words

- **Objective**

The cloze dictation test aims to determine whether the students are able to identify the reduced forms of function words. The students were asked to fill in the blanks in the sentences by writing what they heard from the recording. The number of items included in this test is twenty-six; and any repeated item word was not taken into consideration.

- **Description**

The exercise consists of thirteen sentences, including many function words that are pronounced in their reduced forms. Table 3.5 shows how function words are reduced.

Table 3.5

Reduced Forms of Function Words

N	Function words	Phonemic transcription	Phonetic transcription
1	and	/ænd/	[n]
2	is	/iːz/	[z]
3	shall	/ʃæl/	[ʃl]
4	we	/wiː/	[wɪ]
5	some	/sʌm/	[səm]
6	him	/hiːm/	[ɪm]
7	he	/hiː/	[ɪ]
8	can	/kæn/	[kən]
9	as	/æz/	[əz]
10	am	[æm]	[m]
11	her	/həː/	/ə/
12	at	/æt/	/ət/
13	your	/jɔː/	/jə/
14	should	/ʃʊd/	/ʃəd/
15	have	/hæv/	/əv/
16	you	/juː/	[jə]
17	must	/mʌst/	[məs]
18	was	/wɒz/	[wəz]
19	on	/ɒn/	[ən]
20	his	/hiːz/	[ɪz]
21	to	/tuː/	[tə]
22	do	/duː/	[də]
23	are	/ɑː/	[ə]
24	of	/ɒv/	[əv]
25	them	/ðem/	[ðəm]
26	were	/wəː/	[wə]

Note**.** The sentences used in this exercise are selected from *The Book of Pronunciation* (Marks & Bowen, 2012).

Table 3.5 shows the way the function words are reduced. While some of them undergo only vowel reduction such as 'we, some, can, as, at, should, you, was, on, to, do, them and were', others undergo vowel reduction and consonants loss such as 'and, is, him, he, am, her, have, must, his'. Thus, these function words become unrecognizable and may cause a lot of difficulties to foreign language learners. The task includes twenty-six items, and each item is counted as having one point in score.

3.4.4 Description of Pre-test and Post-test Listening Comprehension Tasks

- **Objective**

The aim of the listening comprehension test is to determine whether or not a perceptual training in connected speech processes, assimilation, elision, reduced forms of function and linking, improves Algerian EFL students' listening comprehension. The students are asked to listen to three conversations about different topics and to answer follow-up activities (As shown in Table 3.6). The purpose is to find out whether students are able to extract information from conversations that use real speech. The total number of items included in the listening comprehension test is forty; each correct item is counted as having one point in score (see Appendix C).

- **Description**

The materials used to test listening comprehension, i.e. the audio and exercises, were taken from Hancock and McDonald's (2014) *Authentic Listening Resource Pack: Bridging the Gap to Real-World Listening.* This is due to three reasons:

- The naturalness of the language: Most of the audio materials used in the book are characterised by the presence of features of conversational speech, mainly connected speech processes.
- The closeness to real-life experience: The book contains a variety of everyday informal conversational topics which are closer to real-life experience.
- The simplification of the activities: The book contains activities which require short responses. These activities are meant to find out whether students are able to extract information from ungraded passages.

In fact, the approach adapted to test students' listening comprehension is the one pointed out by Field (2002). According to him, the language that has not been graded to reflect the learners' level of English affords a listening experience much closer to real-life one. Thus, instead of simplifying the language, it is better to simplify the task that is demanded of the students. "With a text above the language level of the class, one demands only shallow comprehension" (Field 2014, p. 244).

Table 3.6

Activities Included in the Listening Comprehension Test

Topics	**Genre**	**Activities**	**Blocks**
Weather	Informal discussion	**1-**Listening for specific information **a-** Wh questions **b-** Identifying the speakers	**2**
Cooking	Cooking Instructions	**1-**Listening for specific information **a-**Wh questions **2-**Listening for main ideas and detail **a-**Identifying pronouns **b-**Wh questions	**3**
Winter sport	Chat with sportsman's mother	**1-**Listening for key words and phrases **a-**Adding more pieces of information **b-**True/false **c-**Wh questions **2-**Listening for specific information **a-**Complete sentences	**4**
Total	**3**	**40**	**9**

Note. The activities used to pre-teach vocabulary were adapted from *Authentic Listening Resource Pack: Bridging the Gap to Real-World Listening* (Marks & Bowen, 2012).

As Table 3.6 shows, three listening texts were chosen for the listening comprehension test including three topics: weather, cooking, and winter sport. Each text is divided into short, manageable blocks lasting between three and six minutes long; and each is accompanied by a range of activities such as listening for specific information,

listening for key words and phrases, and listening for main ideas and detail. The total number of items included in the listening comprehension test is forty; each correct item is counted as having one point in score.

It is important to mention that before administering the listening comprehension tasks, some appropriate measures to address vocabulary difficulties were taken by providing pre-teaching vocabulary in both the pre-test and post-test (see Appendix E). This was meant to help ensure that the potential difficulty of certain words did not significantly impede students' understanding of the conversations. This ensured consistency and allowed for a fair comparison of the effects of training on connected speech perception and listening comprehension. Thus, including the pre-teaching vocabulary step in both the pre-test and post-test helped to eliminate the potential variable of difficult vocabulary and to maintain the validity and reliability of the study. In fact, using the same materials, such as conversations, listening comprehension tasks, and pre-teaching vocabulary activities from the same book, ensures consistency. It also allows for a fair comparison before and after training performance.

3.4.5 Description of Intervention (Teaching)

The intervention phase was immediately introduced after the administration of the pretest to experimental and control groups.

- **Objective**

The objective of introducing intervention to experimental group is to find out whether teaching connected speech processes, mainly assimilation, linking, elision, and reduced forms of function words, improves students' perception and listening comprehension of real spoken English. During the intervention phase, three main goals were taken into consideration.

- Introduce connected speech processes to raise students' awareness of the way sounds are modified in real natural speech.

- Show the importance of these processes to the development of the listening skill.

- Practice extensively these processes to train students' ears to become familiar with these processes and to reinforce their perception of the modification occurring across word boundaries.

- **Description**

The experimental group received nineteen-week perceptual training sessions. Each weekly session lasted around twenty-five minutes. The first lesson provided an overview of connected speech processes to help students have a general understanding of these processes. The following lessons dealt with these processes separately, that is one process at a time. It started with assimilation, then came linking, followed by elision, and ended with function words. Three to four lessons were devoted to each process. The first lesson was theoretical, that is, it served to explain the rules and to provide examples. The two or three remaining lessons were devoted to practice the targeted process through listening tasks. The last two sessions were devoted to reviewing these processes all together. It is important to mention that in most tasks, phonetic transcription was used. In fact, it is the best way to show accurate sound modifications. Besides, first year students need to learn transcription from the beginning of the year as a part of the syllabus. The organization of the lessons is based on selecting the right materials and tasks, by taking into consideration students' levels of interest, starting with easy tasks and moving to more challenging ones. Table 3.7 below presents data on the perceptual training intervention conducted during the first five weeks, covering an overview of connected speech, followed by assimilation and linking. Data for the remaining 14 weeks are provided in Appendix H for the full study duration.

Table 3.7

Programme of Five-Week Perceptual Training on Connected Speech Processes

<table>
<tr><th colspan="3">Week 1</th></tr>
<tr><th>Level: First year students at ENSB</th><th>Connected speech processes Overview</th><th>Lesson length: 25 minutes</th></tr>
<tr><td colspan="3">Objectives: 1) The aim of the first lesson is to provide a general overview of connected speech processes. 2) Introducing these processes is intended to raise students' awareness about how sounds are modified in real natural speech. 3) Show their importance to develop listening skills, and therefore motivate students.</td></tr>
<tr><td colspan="2">Procedure:
Task 1
Explain why connected speech processes occur.
Task 2
Explain how words are pronounced in their citation forms (in isolation) and how they become modified when pronounced as part of longer utterances. Students listen to a recording from Marks & Bowen (2012) (Track 68). It is mostly about phrases that contain examples of assimilation, linking, elision, and weak forms. The use of only phrases at this stage is important so that the students understand and perceive them easily. A handout containing a list of phrases is handed to the students. They are asked to notice the way the underlined consonants are pronounced. The students listen many times to the recording.
1-goo<u>d</u>bye
2-goo<u>d</u> goal
3-te<u>n</u> games
4-i<u>n</u> case
5-te<u>n</u> books
6-tha<u>t</u> picture
7-thi<u>s</u> shop
8-I ha<u>ve</u> to go
9-It <u>was</u> two o'clock
10-<u>Do you</u> know?
11-the firs<u>t</u> time
12-rock <u>and</u> roll
13-Can you help?
14-a pint <u>of</u> bitter
15-Is <u>he</u> there?
16-Have <u>some</u> more
17-Tell <u>him</u></td><td>-Economy of effort
-Characteristic rhythm of English

-Vowel reduction
-Consonant change
-Consonant deletion
-Sounds linked

With the help of the teacher, the students try to figure out the modifications that occur to the sounds in context. The teacher could also explain the articulation simplification that occurs in each example.

1-/gʊbbaɪ/ d→b (e.g. of assimilation)
2-/gʊggəːl/ d→g (e.g. of assimilation)
3-/teŋgəːl/ n→ŋ (e.g. of assimilation)
4-/ɪŋkeɪ/ n→ŋ (e.g. of assimilation)
5-/tembʊks/ m→m (e.g. of assimilation)
6-/ðæppɪkʧə/ t→p (e.g. of assimilation)
7-/ðɪʃʃɒp/ s→ʃ (e.g. of assimilation)
8-/hæftə/ v→f (e.g. of assimilation)
9-/wəz/ (e.g. of reduction)
10-/ʤə/ (e.g. of assimilation and reduction)
11-/fəːs/ (e.g of elision)
12-/n/ (e.g of reduction)
13-/kən/ (e.g of reduction)
14-/əv/ (e.g of linking and reduction)
15-/ɪ/ (e.g of reduction and linking)
16-/səm/ (e.g of reduction)
17-/telɪm/ (e.g of reduction and linking)
18-/əv/ (e.g of reduction)</td></tr>
</table>

18-You shouldn't **<u>have</u>** **19**-**<u>Shall</u> <u>we</u>** go? **20**-**<u>for</u> <u>a</u>** long time	**19**-/ʃəwə/ (e.g of reduction) **20**-/fərə/ (e.g of reduction and linking)

Week 2		
Level: First Year at ENSB	**Connected speech processes** **Lesson on assimilation**	**Lesson length: 25 minutes**

Objectives: Help students notice the consonants changes, referred to as assimilation, at word boundaries.

In the previous lesson, examples of the four features of connected speech processes are introduced. In this lesson the focus is given to assimilation.	
Procedure: The teacher shows the three types of assimilation.	
1. Progressive assimilation (not common)	**1.** The effect is forward
2. Regressive assimilation (very common)	**2.** The effect is backward
3. Coalescent assimilation (very common)	**3.** The two consonants coalesce to form a new sound.
A handout is handed to the students containing sentences that include regressive and coalescent assimilation.	
a. Students listen to sentences taken from Kelly (2000).	
✶ **Examples of regressive assimilation**	
1. Could you pass me tha**t⌣b**ook, please?	**1.** that book [ðæ**pb**ʊk]
2. Can you see tha**t⌣b**oy over there?	**2.** tha**t⌣b**oy [ðæ**pb**ɔɪ]
3. Where has the ca**t⌣b**een all right?	**3.** ca**t⌣b**een [kæ**pb**ɪn]
4. Who's a cu**te⌣b**aby, then?	**4.** cu**te⌣b**aby[kju:**pb**eɪbɪ]
b. In the examples bellow, the students are required to formulate the rules of assimilation.	**Rules:** Alveolar consonants /t/, /d/, and /n/ become bilabial before bilabial consonants /p/, /b/, and /m/.
5. He's rather a fa**t⌣b**oy	**5.** fa**t⌣b**oy[fæ**pb**ɔɪ] **t→p** next to **b**
6. She's got an apar**<u>tm</u>**ent in Manhattan.	**6.** apar**<u>tm</u>**ent [əpɑ:**pm**ənt] **t→p** next to **m**
7. He's a very goo**d⌣b**oy	**7.** goo**d⌣b**oy [gʊ**bb**ɔɪ] **d→b** next to **b**
8. There are te**n⌣m**en in the class, and two women.	**8.** te**n⌣m**en [te**mm**en] **n→m** next to **m**
9. Where has tha**t⌣c**at been all night?	**9.** tha**t⌣c**at [ðæ**kk**æt] **t→k** next to **k**
10. Can you see tha**t⌣g**irl over there?	**10.** tha**t⌣g**irl [ðæ**kk**ə:l] **t→g** next to **k**
11. It was a very goo**d⌣c**oncert.	**11.** goo**d⌣c**oncert [gʊ**gk**ɒnsət] **d→g** next to **k**
12. She's a very goo**d⌣g**irl.	**12.** goo**d⌣g**irl [gʊ**gg**ə:l] **d→g** next to **g**
13. He's bringing his ow**n⌣c**ar	**13.** ow**n⌣c**ar [əʊ**ŋk**ɑ:] **n→ŋ** next to **k**
14. I've bee**n⌣g**oing out too much lately.	**14.** bee**n⌣g**oing [bɪ**ŋg**əʊɪŋ] **n→ŋ** next to **g**
15. I really love thi**s⌣s**hiny one over here.	**15.** thi**s⌣s**hiny[ðɪ**ʃʃ**aɪnɪ] **s→ʃ** next to **ʃ**

16. We found this lovely little chee**se◡sh**op in Paris. **Remark:** It is important to point out that assimilation may also occur within words, as it is the case of example 6 '*apar**t**ment'*.	**16.** chee**se◡sh**op [ʧi:ʒʃɒp] **z→ʒ** next to **ʃ**
✶ **Examples of coalescent assimilation**	
17. What **are you going to** do?	**17.** [wɒʧəgənə]
18. Who di**d y**ou say we were meeting?	**18.** [ʤə]
19. You used to play the piano, didn**'t y**ou?	**19.** [ʧə]
20. How about **y**ou?	**20.** [ʧʊ]
21. What di**d y**ou use to play?	**21.** [ʤə]
22. Didn**'t y**ou say she was coming at seven?	**22.** [ʧə]

Week 3		
Level: First year students at ENSB	**Connected speech processes Practicing on assimilation**	**Lesson length: 25 minutes**
Objectives: Practicing assimilation so that the students become familiar with the modifications of sounds occurring across word boundaries.		

Procedure:

After introducing rules about assimilation in the previous lesson, the students are given two exercises in order to reinforce their perception of sound changes at word boundaries.

Task 1: The students are asked to listen to a recording taken from Hewings (2004), and to do the following:

a. They are required to find out whether the last consonants of the words in column A assimilate with the words in column B or in column C.
b. They are also required to identify the assimilated consonant in each phrase.

A	B	C
1-Hot	A ho**t** pizza	A ho**t** oven
2-Good	A goo**d** excuse	A goo**d** price
3-Seven	Seve**n** languages	Seve**n** people
4-Short	A shor**t** boy	A shor**t** way
5-Red	A re**d** bike	A re**d** apple
6-Brown	A brow**n** suit	A brow**n** beard
7-White	Whi**t**e wine	Whi**t**e coffee
8-Bad	A ba**d** cold	A ba**d** illness
9-Ten	Te**n** cars	Te**n** letters
10-Light	Ligh**t** rain	Ligh**t** green
11-Wide	A wi**d**e river	A wi**d**e gap
12-Green	A gree**n** sofa	Gree**n** grass

Answers to Task 1 (a) and (b)

B	C
1-ho**p**	1-ho**t**
2-goo**d**	2-goo**b**
3-Seve**n**	3-Seve**m**
4-sho**rp**	4-shor**t**
5-re**b**	5- re**d**
6-brow**n**	6-brow**m**
7-Whi**t**e	7-Whi**k**
8-A ba**g**	8-ba**d**
9-Te**n**	9-Te**n**
10-Ligh**t**	10-Ligh**k**
11-wide	11-A wi**g**
12-gree**n**	Gree**n** grass

Task 2: Students are required to listen to six sentences taken from Vaughan-Rees (2002), and to transcribe the words in bold, focusing more on the consonant changes at word boundaries. **1.** Make sure everything's **in place**, **in case** they arrive early. **2.** Instead of taking the bus, let's walk through **Green Park** and **Hyde Park**. **3.** That's the **third person** I've seen wearing a **red coat** this morning. **4.** Would you prefer eggs **and bacon** or sausages **and mashed** potatoes? **5.** I spent half the year **in Paris** and the rest **in Berlin.** **6.** The only thing I keep in my **handbag** is a purse and a **handkerchief**.	**Answers to task 2** **1.** [ɪ**mp**leɪs] [ɪ**ŋk**eɪs] **2.** [griː**mp**ɑːk] [haɪ**bp**ɑːk] **3.** [θəː**b**pəːson] [re**gk**əʊt] **4.** [ə**m**beɪkən] [ə**mm**æʃt] **5.** [ɪ**m**pærɪs] [ɪ**m**bəːlɪn] **6.** [hæ**mb**æg] [hæ**ŋk**ətʃɪf]

Week 4		
Level: First year students at ENSB	**Connected speech processes Reviewing assimilation**	**Lesson length: 25 minutes**

Objectives: Practicing assimilation so that the students become familiar with the modification of consonants across word boundaries.

Procedure **a. Task 1: Cloze dictation** Students are asked to listen to the sentences below and to fill in with the missing words**.** The missing words undergo sound modifications at word boundaries, in particular regressive assimilation or coalescent assimilation. The sentences are taken from Cleary et al. (2003) and Clare et al. (2013). **1.** Is ..... answer, Mei-Lun? Sorry, try again. **2.** Candice. If I ..... you cheating again, I'll take you to the Principal! **3.** ..... like to tell me why you didn't do your homework, Susan? **4.** Ashley, we can't hear you. ..... speak up? **5.** What about you, Tyler? ..... know the answer? **6.** What ..... mean? You were too sleepy to study? Do ..... how important this test is? **7.** A lot of fashion trends kick off .... **8.** Sometimes all it takes is ..... to set a new trend. **9.** An ..... can suddenly be a bestseller	**Answers to task 1** **1.** Is **that your** answer, Mei-Lun? Sorry, try again. **2.** Candice. If I **catch you** cheating again, I'll take you to the Principal! **3. Would you** like to tell me why you didn't do your homework, Susan? **4.** Ashley, we can't hear you. **Could you** speak up? **5.** What about you, Tyler? **Do you** know the answer? **6.** What **do you** mean? You were too sleepy to study? **Do you** know how important this test is? **7.** A lot of fashion trends kicked off **in Manhattan.** **8.** Sometimes all it takes is **one person** to set a new trend. **9.** An **unknown book** can suddenly be a

overnight. **10.** A viral video will suddenly get .... hits. **11.** Just ..... of shoes on the right feet ..... all the difference. **12.** It might not look that great on you or ...., but on the right person it .....a hit! **Task 2: Dictation** The students are asked to listen to a short dialogue and to write down what they hear. The dialogue contains some examples of coalescent assimilation which are highlighted in bold.	bestseller overnight. **10.** A viral video will suddenly get **ten million** hits. **11.** Just **one pair** of shoes on the right feet **can make** all the difference. **12.** It might not look that great on you or **on me**, but on the right person it **can be** a hit! **Answers to task 2** **A:** So **what do you** think about the old town? **B:** Well, it's great being back. **A:** It's changed a **lot you** know. **B: What do you** mean? **A: Do you** remember the Odeon theater on First Avenue? **B:** Yeah. I saw it yesterday. Now it's an office building.

Week 5		
Level: First year students at ENSB	**Connected speech processes Lesson on linking (1)**	**Lesson length: 25 minutes**

Objectives: Explain how words are linked in different contexts, and introduce different linking rules.

Procedure

The teacher explains that English native speakers link words together; in particular, they link the final sound of one word to the initial sound of the next word, so that they sound as one word.

There are various ways of linking words depending on the context in which sounds meet at word boundaries. The teacher then goes through linking rules by providing listening examples on each rule.

✶ **Linking consonant to vowel**

The teacher explains that if a word ends in a consonant and the next word starts with a vowel, thus the consonant and the vowel are linked. It sounds as if the consonant is part of the second words, a process called resyllabification. Then, the students listen to the examples below taken from Cleary et al. (2003), and notice the way consonants and vowels are connected at word boundaries.

1. Ca**n‿I** try i**t‿o**n?
2. Yes, I want**‿a** shir**t‿a**nd ties
3. We'll**‿ha**ve to pla**ce‿an‿o**rder, I'**m‿a**fraid.
4. Thi**s‿i**s too small. Have you go**t‿it‿i**n larger size?
5. I'd li**ke‿it‿i**n blue. Have you go**t‿a** blue one?
6. It'**s‿a** perfect fit. Ca**n‿I** ha**ve‿a** discount?

✶ **Linking /r/** The teacher explains that in British English the letter 'r' at the end of a word is generally not pronounced, but if the following word begins with a vowel, the letter 'r' is then pronounced and links the two words. The teacher writes on the board the examples below (taken from Hewings, 2004). She plays the audio and asks the students to focus on the sound /r/ across word boundaries.	
1. fou**r‿e**lephants	**1.** [fɔ:**re**lɪfənts]
2. anothe**r‿i**ce cream	**2.** [ənʌðə**raɪ**s]
3. poo**r‿e**xample	**3.** [pʊ**ərɪ**gzɑ:mpl]
4. mor**e‿a**pples	**4.** [mɔ:**r**æplz]
5. were**‿o**pen	**5.** [wə**rə**ʊpən]
6. Somewhere else	**6.** [səmweə**re**ls]
✶ **Linking plosive to consonant** The plosive consonants /p/, /t/, /k/, /b/, /d/, /g/ are produced with a blockage followed by release of the airflow; but when it is the last sound of a phrase or it is followed by another consonant, it is often inaudible. Though the articulators are ready to make the plosive but the air is not released. Students listen to the examples below (taken from Ashton & Shepherd, 2012; Mojsin, 2009) and pay more attention to the way plosives are pronounced in these contexts. To indicate that the plosives are inaudible and unreleased, a raise little angle is used [ˀ].	
1. pop music	**1.** [pɒ**p**ˀ**m**ju:zɪ**k**ˀ]
2. good book	**2.** [gʊ**d**ˀ**b**ʊ**k**ˀ]
3. can't go	**3.** [kæn**t**ˀ**g**əʊ]
4. that man	**4.** [ðæ**t**ˀ**m**æn]
5. drop down	**5.** [drɒ**p**ˀ**d**aʊn]
6. keep trying	**6.** [ki:**p**ˀ**t**raɪɪŋ]
7. should think	**7.** [ʃə**d**ˀ**θ**ɪŋ**k**ˀ]
8. stop looking	**8.** [stɒ**p**ˀ**l**ʊkɪŋ]
9. club member	**9.** [klʌ**b**ˀ**m**embə]
10. quick change	**10.** [kwɪ**k**ˀ**ʧ**eɪnʤ]
11. big change	**11**. [bɪ**g**ˀ**ʧ**eɪnʤ]

3.4.6 Posttest Administration

A week after the completion of the intervention, the posttest was administered to both groups. The same procedure, the same steps, and the same tests used in the pretest were used in the posttest, i.e. the perceptual activities and the listening comprehension activities were similar to the ones used in the pretest. However, the students did not

realize that the tasks were similar because the posttest was administered after a duration of 19 weeks had elapsed. This was meant to strengthen the internal validity of the study.

3.4.7 Description of the Post-experiment Questionnaire to Students

- **Objective**

Dörnyei (2003) states that the popularity of questionnaires comes from the fact that they are easy to design, can be used in many different ways, and are really good at collecting a lot of information quickly. This information is also easy to organize and analyze. Accordingly, at the end of the experiment a post-experiment questionnaire was administered solely to the students of the experimental group to obtain their perception, assessment, and evaluation of the instruction on connected speech processes. This would allow the triangulation of the results obtained.

- **Description**

The post-experiment questionnaire began with a very short introduction, explaining the purpose of the questionnaire and offering anonymity. In a questionnaire that asked students to evaluate their teacher's instruction, assess their own attitudes as well as their overall performance of the target forms, it was important to ensure that the survey would remain anonymous, and to explain that there would be no way of linking their responses to their names. This was meant to eliminate any bias that could influence the researcher's analysis of the student's responses.

The questionnaire consists of two sections, section one comprises general questions concerning listening; section two consists of questions that deal with students' attitudes to the training on connected speech processes (see Appendix F).

- **Types of Questions**

The post-experiment questionnaire comprises thirteen questions; twelve questions are closed-ended items. They include five-point Likert questions, list questions, and yes/no questions. However, many closed-ended questions are followed by clarification questions justifying students' choice of responses. The questionnaire ends with an open-ended question.

- **Likert Type Questions**

Seven five-point Likert questions are included in this questionnaire, which are questions 1, 2, 5, 6, 7, 8, and 9. For example,

1-Do you think that listening to real spoken English is

a-Extremely difficult?
b-Very difficult?
c-Difficult?
d-Slightly difficult?
e-Not difficult at all?

- **List Questions**

In list questions the students can check as many elements as they are applicable such as question 12 or check only one item or element such as questions 4 and 9. For example:

4-In a listening session, do you prefer that your teacher uses material that includes

a-simplified and well articulated speech? or
b-normal real speech?

12-If not, which of the following connected speech processes do you think you need more training?

a-Assimilation
b-Linking
c-Elision
d-Reduced forms of function words

- **Yes/No Question**

In yes/no questions students are expected to respond with yes or no. Question 11 is the only Yes/No question included in the questionnaire. For example:

11-Do you think that the duration of the training on connected speech processes is appropriate?

Yes ☐ No ☐

- **Clarification Questions**

Most of the closed-ended items are followed, however, by clarification questions (or "why" questions) asking the students additional information about the reason behind choosing an option or element. For example, questions 1, 4, 5, 6, 7 and 10 are all followed by clarification questions. For example:

4-In a listening session, do you prefer that your teacher uses material that includes
a-simplified and well articulated speech? or
b-normal real speech?
-Why? Please justify.

- **Open-ended Question**

The open-ended question aims at encouraging the students to give detailed information regarding the target forms. It appears at the end of the questionnaire and asks the students for further comments. For example:
13-Please, feel free to add any other comment on this topic.

3.4.8 Description of the Questionnaire to Teachers

- **Objective**

Teachers' questionnaire is meant to gain deeper understanding of how listening is dealt with in a foreign language learning context. More precisely, it aims to examine teachers' attitudes, opinions, preferences and practices concerning the teaching of listening in general, and the inclusion of pronunciation instruction and connected speech processes in particular (see Appendix G).

- **Description**

Teachers' questionnaire consists of two sections. Section one is about teachers' attitudes to the inclusion of pronunciation instruction in listening classes. Its aim is to find out whether teachers of listening include pronunciation instruction in their classes; which elements of pronunciation they focus on; whether they give importance to connected speech processes; and the challenges they face when including pronunciation instruction.

Section two is about teachers' attitudes towards the teaching of listening in general. It aims to find out about the teachers' opinions concerning the listening curriculum of ENSB, and whether listening is taught or tested; the difficulty they encounter when teaching listening; and the material they prefer to include in their lessons

- **Types of Questions**

The teachers' questionnaire comprises nineteen questions; sixteen close-ended questions and three open-ended questions. The close-ended questions include five-point Likert questions, list questions, and yes/no questions. Many close-ended questions are followed by clarification questions seeking more information that justifies teachers' choice of responses.

- **Likert Type Questions**

The teachers' questionnaire includes even five-point Likert questions. These are questions 1, 3, 5, 8, 14, 15, and 17. For example:

1-To what extent is it important to include pronunciation instruction in your listening classes to improve students' listening comprehension?

a-Extremely important

b-Very important

c-Moderately important

d-Slightly important

e-Not important at all

- **List Questions**

In such questions the teachers can choose many elements that correspond to them such as questions 4, 9, and 11, or choose only one item or element such as questions 7 and 16. For example:

7-What do you do when a common word in the listening material you teach is not recognizable to your students?

a-You just ignore it.

b-You just pronounce it again to make it recognizable.

c-You pronounce it and explain the rules of modification the word has undergone.

- **Yes/No Questions**

In such questions the teachers are required to respond with yes or no. There are four Yes/No questions in the questionnaire, which are questions 2, 6, 10, and 18. For example:

2-Do you include pronunciation instruction in your listening classes?

a-Yes ☐ **b-**Sometimes ☐ **c-**No ☐

- **Clarification Questions**

Many closed-ended items are followed by clarification questions (or "why" questions) which are meant to add information about the reasons behind choosing an option or element. For example, questions 1, 4, 5, 6, 7 and 10 are all followed by clarification questions.

In addition to the pre-post tests and questionnaires administered to students and teachers, this study integrates document analysis as a third tool. Document analysis is employed to systematically evaluate the first-year listening and phonetics syllabi to gain deeper insights into their contents, objectives, methodologies, assessments, resources, student engagement, feedback mechanisms, and alignment with connected speech processes.

3.4.9 Document Analysis of First-Year Listening and Phonetics Syllabi

- **Objective**

Document analysis is a qualitative research method used to systematically evaluate and interpret documents in order to gain understanding and insight into a particular subject (Bowen, 2009). In the present study, this method involves a structured examination of the first-year listening and phonetics syllabi (see Appendix I). It is

important to clarify that the phonetics syllabus is not limited to phonetics alone; it also encompasses phonology, thereby providing students with exposure to both segmental and suprasegmental features of the English sound system. The phonetics component focuses on the articulation and transcription of individual sounds, while the phonology component covers sound patterns, prosodic features, and connected speech processes. This distinction is crucial for evaluating the extent to which connected speech is explicitly integrated into the curriculum.

The analysis of the listening and phonetics syllabi aims to:

- Seeks to critically review the syllabi to identify strengths and weaknesses.
- Evaluate the coverage of connected speech processes within the syllabi.
- Complement and validate the findings from the pre-post tests and questionnaires administered to students and teachers.

- **Description**

The document analysis was conducted using a framework based on the combined elements from Brown (1995), Graves (2000), and Nation and Macalister (2010) frameworks. This framework focuses on content review, objective evaluation, methodology examination, assessment analysis, resource assessment, student engagement, and feedback mechanisms. Each element is described briefly, highlighting its focus on evaluating different aspects of the syllabus to ensure they are relevant, comprehensive, and aligned with the overall learning goals, as shown in Table 3.8 below.

Table 3.8

Comprehensive Framework for Syllabus Analysis

Elements	Description	Frameworks
1. Content Review	Assessing the topics, materials, and activities included to determine their relevance and comprehensiveness in addressing the learning goals.	Graves, Nation and Macalister
2. Objectives Evaluation	Analyzing the stated goals and objectives to ensure they align with the overall aims of the course and meet the needs of the learners.	Brown, Graves, Nation and Macalister
3. Methodology Examination	Reviewing the suggested teaching methods and approaches to understand how skills are intended to be developed.	Brown, Graves, Nation and Macalister
4. Assessment Analysis	Reviewing the types and frequency of assessments to determine if they effectively measure learners' understanding and skills.	Brown, Graves, Nation and Macalister
5. Resource Assessment	Evaluating the resources and materials recommended or provided, such as textbooks, multimedia, and tools, to ensure they are suitable and sufficient for the course.	Brown, Graves, Nation and Macalister
6. Student Engagement	Assessing how the syllabus encourages learner participation and engagement in the learning activities.	Brown, Graves, Nation and Macalister
7. Feedback Mechanisms	Reviewing how the syllabus incorporates mechanisms for providing feedback to learners to support their improvement.	Brown, Graves

Incorporating document analysis in this study aims to provide a comprehensive evaluation of the current educational materials and offer recommendations for enhancing the teaching and learning of connected speech processes in EFL contexts.

3.5 Data Collection Procedure

Because tests can offer only general estimates of students' proficiency, it is necessary to include other tools, such as questionnaires, in order to have a comprehensive understanding of the topic under study which is connected speech processes. As explained in the preceding sections, three measures were used. To find out about participants' progress in classroom settings, pretest and posttest measures as well as questionnaires were used. To explore teachers' attitudes, opinions, preferences, and practices about teaching listening in general and teaching connected speech processes in particular, a questionnaire was administered. The last tool used in this study is the document analysis of the first-year listening and phonetics syllabi. The syllabi were analyzed, involving a detailed review of their content, objectives, methodologies, assessments, resources, student engagement, feedback mechanisms, and coverage of connected speech processes. This enabled triangulation of the findings which relies on gathering information from multiple sources. The aim is to increase validity and reliability. "Reliability can be enhanced when data from more than one source are triangulated to provide a more complete picture of the construct under investigation" (Vandergrift 2007, p. 192). So does validity which is also obtained from multiple sources of data.

This section explains the procedure undertaken from the beginning to the end of the study when collecting data from different sources (as shown in Figure 3.1 below).

This study took place in a listening class, where a questionnaire was first administered to students (pre-test questionnaire). None of the participants found it difficult to complete. It is important to note that the initial number of students was 117 in the beginning of this study, but the data from 9 participants were discarded because either they were absent on the day of the pre/post-test (4 participants); or they did not attend the training (2 participants); or they took part in a program which included connected speech processes (1 participant); or simply because they reported having a hearing problem (2 participants). Therefore, the data from only 108 students were taken into consideration.

After the participants had finished completing the questionnaire, the pretest took place. A battery of listening activities dealing with perception and comprehension were administered to them. Starting with perceptual activities, there were two activities dealing

with assimilation (sound identification and word identification); followed by an activity about linking (gap filling); then followed by an activity on elision (dictation); and finally ended with an activity about reduced forms of function words (cloze dictation).

The participants had enough time to read and understand each task assigned to them; and the recorder was stopped after listening to each sentence, giving them enough time to fill in the blanks, as it is the case with the activities about assimilation, linking, and function words; or to write full sentences as it is the case with the activity on elision.

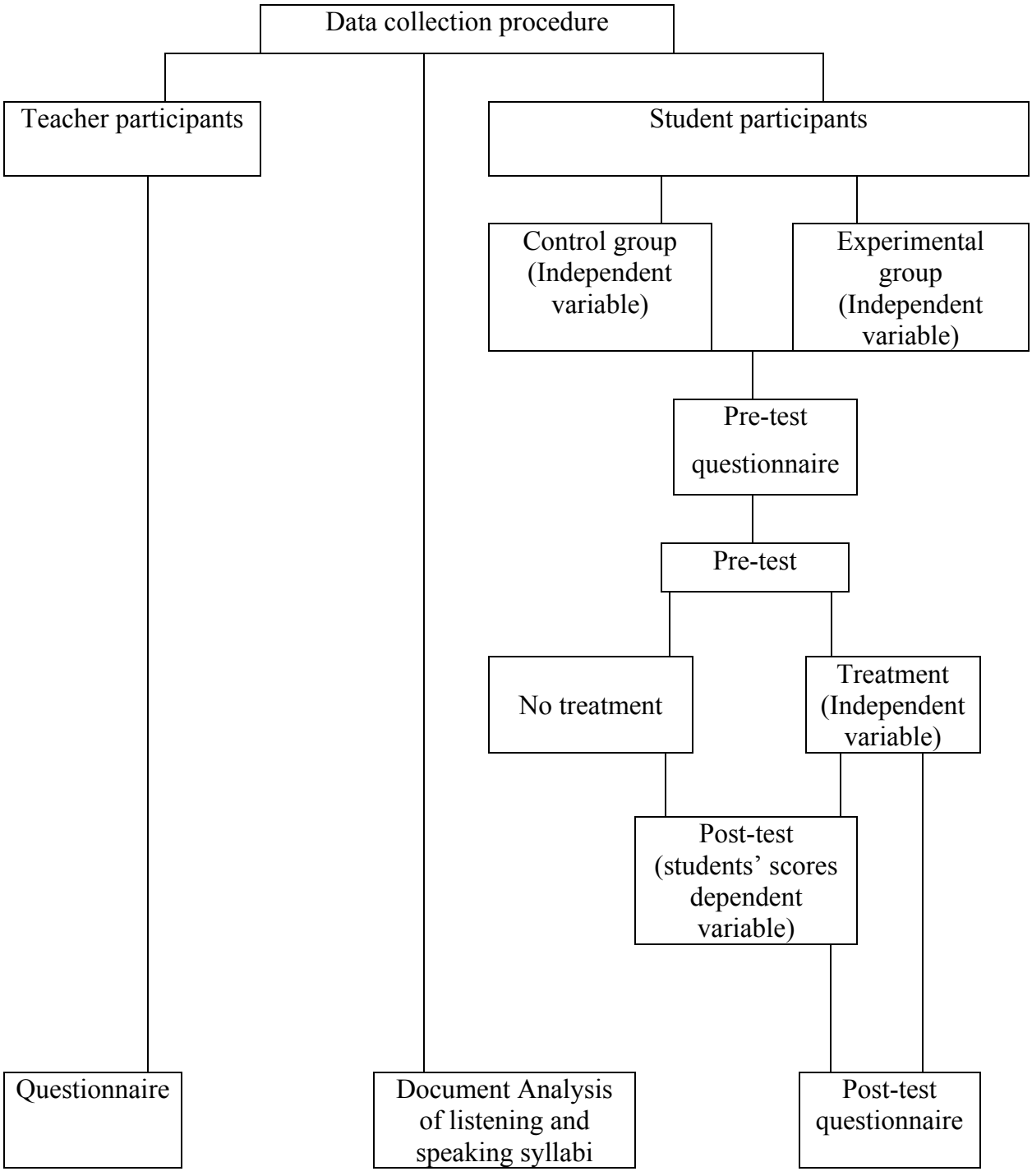
Before starting the listening comprehension activities, and in order to eliminate the variable concerning the challenging vocabulary, that is, the words that might cause difficulty to the students, it seemed practical to use the pre-teaching vocabulary activities proposed by Hancock and McDonald (2014), from whom all the listening comprehension activities were chosen (see Appendix E).

The recording was played twice for all the activities to allow the participants to become familiar with the speakers' pitch, speed, and quality of the voice (Field, 2002). The listening activities were carried out in a language laboratory in order to ensure good listening quality. With the help of two teachers, the data concerning the pretest were gathered on the same day and at the same hours. It took roughly 3 hours to administer the pretest.

A week after collecting pretest data, the treatment on connected speech processes began. To have the experimental intervention respected, some steps were followed so that the study results would not be influenced by any unexpected variables. Cross and Vandergrift (2015), who provide some suggestions for planning and carrying research interventions for L2 listening, highly recommend that groups of participants in an experimental or quasi-experimental study are taught by the same person. This is crucial for controlling the influence of the teacher variable, which can greatly impact the outcomes of the study. By having a consistent teacher, any differences in the results can be more confidently attributed to the treatment or intervention being investigated, rather than variations in teaching style or ability.

Figure 3.1

Data Collection Procedure



Therefore, the same teacher, i.e. the researcher herself, taught both the experimental and control groups. All these instruments (tests, questionnaires, and document analysis of listening and phonetics syllabi) were fully described in the preceding sections. Figure 3.1 above sums up the data collection procedure.

Another suggestion made by Cross and Vandergrift (2015) is that the participants in a study, be it experimental group or control group, must listen to the same texts for the same number of times. In other words, if there is any difference in the way of teaching listening to the two groups, such as using different texts or not respecting the number of listening times, then no doubt, the group with more listening opportunities would do better. Accordingly, apart from teaching the experimental group connected speech processes perceptually for twenty minutes a week during five months, the way of teaching listening for both groups was identical.

At the end of the training, a posttest was administered. The same measures taken in pretest were also taken in the posttest. Researchers (such as Brown, 1997; Cross and Vandergrift, 2015) point out to the fact that the same tests used for the pre-test should also be used for post-test to determine any differences in students' scores between control and experimental groups at the end of the study. Though, when employing the same pre- and post- tests, it is necessary to leave enough time between the two tests, so that students will not recall the tests and their responses. As pointed out by Cross and Vandergrift (2015, p. 88) "it is important that there is a sufficient period of time between the administration of the two tests to minimize the students' recall of content, tasks, or responses." Accordingly, the posttest took place five months after the administration of the pretest.

Immediately after the posttest was complete, the post-experiment questionnaire was administered solely to the experimental group to find out about the students' attitudes, their evaluation of the target forms as well as the effect of instruction on them. It took students an average of 20 minutes to fill it in. The responses obtained from the questionnaire were meant to be compared to the results obtained from the pre and post test to see whether they corroborate or not, and to check the reliability and validity of the study. At the end of the experiment, the tests were corrected and the comparison between the experimental group and the control group was carried out.

Another tool used in this study is the questionnaire administered to teachers. Though the researcher's intention to conduct research on teachers was planned from the very beginning of the study, the positive results obtained from the experiment made the idea more stimulating. Therefore, after piloting the teachers' questionnaire by some colleagues, and approved by the researcher' supervisor, it was distributed to the whole population, i.e.

to 10 teachers of listening. Two teachers filled it on the same day; two other teachers handed it back two weeks later; upon their request, three teachers received it and filled it on-line. The questionnaire was also emailed to three other teachers who did not fill it in. Thus, only 7 teachers out of 10 responded to the questionnaire. The analysis of the questionnaire did not take place until one month and a half had elapsed, in the hope that other teachers would fill in the questionnaire.

The last tool used in this study is the document analysis of the first-year listening and phonetics syllabi. The syllabi were analyzed, involving a detailed review of their content, objectives, methodologies, assessments, resources, student engagement, and feedback mechanisms, and coverage of connected speech processes, as described in Tables 3.8 above.

3.6 Data Analysis Procedure

Data analysis was carried out after gathering data. To compare the means of the experimental and the control groups, the appropriate test was the *t* test using SPSS. To analyze students' questionnaire and teachers' questionnaire, if the data were close-ended, simple descriptive statistics were utilised; if the data were open-ended, content analysis was carried out; the themes were deduced and then interpreted, i.e. the data where coded and the themes were identified and then interpreted. Besides the themes, quotations from students and teachers were added in order "to illustrate the pattern or theme and are provided so that the reader can see the justification for identifying the pattern or theme" (Langenbach et al. 1994, p. 243). These types of analysis are described below.

The choice of the correct statistic will depend on the number of groups involved, the types of scales and the participants (Brown, 1997). Thus, this section is meant to explain step by step the statistical analysis implemented in this study.

As mentioned in Section 3.2, the study is a quasi-experiment design involving the comparison of the means of two different groups, experimental and the control groups for one continuous variable, i.e. the students' scores on connected speech scores and listening comprehension. Comparing the means of the two groups on the pretest is meant to find out whether or not the two means are similar prior to the intervention. In addition, comparing the means between the two groups on the posttest is meant to find out whether

or not the two means are different after the intervention. This design can provide some evidence that it is the intervention which produced some changes in the students' performance and that these changes are not due merely to chance.

3.6.1 *t* Test

When comparing means tests between two different groups, i.e. experimental and control groups, the appropriate test is called independent-samples *t* test, also referred to as a between-groups design. However, the *t* test cannot be used for inferential purposes because there are many threats to the external validity of the study (Hatch & Lazaraton 1991). Among these threats is the fact that the students are not randomly selected or randomly assigned, i.e. they are just intact groups. So, even though the *t* test allows for generalization, the design of the present study prevents such generalization. Consequently, the *t* test in this study is being used for descriptive purposes only.

It is important to mention that the independent-samples *t* test was carried out using SPSS Statistics, allowing therefore interpretation and description of the results obtained from each test.

3.6.2 Critical p Value

In most applied linguistics studies, the level of significance, which is also called the probability level, is by convention set at $p < .05$ for all statistical tests, a level at which a null hypothesis can be accepted or rejected. The .05 probability means that there are fewer than 5 chances in 100, i.e. 5%, therefore the probability of being wrong in rejecting the H_0 is small. In the present study, the alpha level was set at .05 to show that the statistically significant difference, if there is any, between the two means obtained from the pre and post tests, have only 5% probability of occurring by chance, and that 95% probability is due to the treatment. Furthermore, a two-tailed non-directional test was established; i.e. without saying which group will be better,

3.6.4 Effect size

Though the independent-samples *t* test is considered as a robust test, yielding accurate results, calculating and reporting effect size becomes essential to good research. But, statistical significance evaluating *p* value is not the only important statistic to report;

effect size is also of equal importance. In fact, journals such as the Second Language Journal, Language Learning and the American Psychological Association (APA) insist on including effect size in addition to statistical significance and confidence intervals, for the articles to be published. Christensen et al. (2015, p. 275) define effect size as "the magnitude of the relation between the independent and dependent variable in a population". According to Creswell & Creswell (2018) an effect size determines the strength of the conclusions about the differences between two groups. This implies that the effect size of an experimental study determines how large the effect of an intervention on the two groups is. Though, a *p* value can tell if there is an effect, but does not tell how large that effect is.

Effect size is calculated using Cohen's *d* which is appropriate if two groups have similar standard deviations and are of the same size, which is the case of this study. Since SPSS does not provide measures of effect size, the following formula is used:

$$Cohen's\ d\ = \frac{(M_2\ - M_1)}{Pooled\ SD}$$

For the independent samples *t*-test, Cohen's *d* is determined by calculating the mean difference between the two groups, and then dividing the result by the *pooled* standard deviation.

The formula for pooled *SD* is as follows:

$$Pooled\ SD\ = \sqrt{\frac{(SD_1{}^2 + SD_2{}^2)}{2}}$$

The components of the formulas are:

- M_1 = The mean of control group
- M_2 = The mean of experimental group
- SD_1 = The standard deviation of control group
- SD_2 = The standard deviation of experimental group

Cohen's d interpretation is as follows:

- d = 0.2 or smaller is considered to be a 'small' effect size,

- d = 0.5 is considered to be a ‘medium’ effect size
- d = 0.8 or larger is considered to be a ‘large’ effect size.

This indicates that if an effect size is large, the difference between the two means is important. However, if an effect size is small, the difference is not important.

Conclusion

This chapter was meant to describe the research method and design utilized to examine the effect of teaching connected speech processes on first year students’ perception and listening comprehension. The design opted for is a quasi-experiment design employed in a classroom context. Since the study used a two-group pretest-posttest design, it involved giving the experimental and control groups tasks that had been properly chosen both before and after the treatment. In addition to the use of pretest and posttest before and after the treatment, two questionnaires were administered to the participants. While the pre-experiment questionnaire was given to both groups to gather data about their background and previous learning experiences; the post-experiment questionnaire was administered only to the experimental group to find out about their attitudes towards connected speech training. To gain a thorough understanding of how teaching EFL foreign language listening is handled in the classroom, a questionnaire was given to teachers to find out about their attitudes and opinions on the teaching of listening in general and connected speech processes in particular. Lastly, document analysis of the listening and phonetics syllabi was conducted to thoroughly evaluate the existing educational materials and propose enhancements for teaching and learning connected speech processes. The chapter also describes tools mentioned above, which are the three means used to collect data, and the statistical procedure used for data analysis. Therefore, the crucial elements of the design that were explained in this chapter served to strengthen the study by addressing affectively the threats to internal and external validity. The coming chapter (Chapter five) is devoted to the results of the study.

Chapter Four: Presentation and Analysis of the Results

Chapter Four: Presentation and Analysis of the Results

Introduction

The present chapter aims to analyze pretest and post-test results, questionnaires administered to both students and teachers, and the content of first-year listening and phonetics syllabi. The chapter is divided into six sections. Section 4.1 compares the responses of experimental and control subjects to the pre-test questionnaire. Section 4.2 is devoted to the results of pre-test and posttest on perceptual tasks. It compares the results of experimental and control groups on the four perceptual tasks, on each of the four perceptual tasks (i.e. assimilation, linking, elision and reduced forms of function words). Section 4.3 compares the results of pre-test and post-test listening comprehension tasks. Section 4.4 presents the responses to the post-test questionnaire completed by the experimental group. Section 4.5 analyzes the results of the teachers' questionnaire. Closed-ended responses are displayed in tables, while open-ended questions are analyzed using manual thematic analysis. Finally, Section 4.6 presents the results of the document analysis of the first-year listening and phonetics syllabi. By gathering data from multiple sources, a deeper and more comprehensive understanding of the research topic is achieved. Moreover, this approach ensures the reliability and validity of the findings by incorporating different perspectives and allowing for triangulation of results.

4.1 Comparing Pre-Test Questionnaire Responses of Experimental and Control Groups

- **Background Information**

1-Gender: Male ☐ Female ☐

Table 4.1

Participants' Gender

Responses	Number of students	Percentages
Female	104	96.30%
Male	4	03.70%
Total	**108**	**100%**

Table 4.1 shows the number of participants (108 students) that took part in this study. The majority are female (104) 96.30% and only 4 (03.70%) are male. In fact, the majority of the students studying at ENSB are female students; and this may be due to the fact that many of them choose to become teachers. Besides, students who have access to the College must have attained an average score of at least 15 out of 20 in the Baccalaureate examination which is taken at the end of the secondary school studies. These students are female in their majority.

2-Age:

Table 4.2

Participants' Age

Responses	Number of students	Percentages
18	78	72.22%
17	16	14.81%
19	14	12.97%
Total	**108**	**100%**

Table 4.2 represents the participants' age which ranges from 17 to 19 with a median of 18. The students' age limit at ENSB is 25 years old. Students who are over 25 years old are not allowed to enroll in the College for a degree course. Besides, they have to start their studies the same year they get their Baccalaureate degree, and they do not have the right for a gap year.

3-How long have you been learning English?

Table 4.3

Number of Years Spent on Learning English

Responses	**Number of students**	**Percentages**
7 years	84	77.77%
8 years	24	22.23%
Total	**108**	**100%**

Table 4.3 represents the number of years the participants spent on studying English. Algerian students generally study English 4 years in middle school and 3 years in secondary school, that is a total of 7 years. For those who studied 8 years, they had failed a grade, i.e., repeated one year in the course of their studies.

4-Do you have any hearing problem?

Yes ☐ No ☐

Table 4.4

Students' with Hearing Problem

Responses	**Number of students**	**Percentage**
No	108	100%
Yes	00	00%
Total	**108**	**100%**

Table 4.4 represents the percentage of the students with a hearing problem. No respondent (100%) has a hearing problem. This question is important because all the exercises of the experiment require an accurate perceptual ability; it was therefore meant to discard participants who have such a problem.

5-Have you ever lived in an English speaking country?

Table 4.5

Students Who Lived in an English Speaking Country

Responses	**Number of students**	**Percentage**
No	108	100%
Yes	00	00%
Total	**108**	**100%**

Table 4.5 is meant to identify of students who lived in an English speaking country. All the participants (100%) reported not having lived in any English speaking country. Like the previous question, this question is meant to discard any student who lived in an English speaking country in order not to affect the result of this study.

- **Language Information**

6-Do you listen to English outside the classroom?

Table 4.6

Percentage of the Students Listening to English Outside the Classroom

Responses	**Number of students**	**Percentage**
Yes	108	100%
No	00	00%
Total	**108**	**100%**

Table 4.6 shows the percentage of the students listening to English outside the classroom. All the respondents (100%) said that they listened to English outside the classroom, which is a good way to improve not only listening skills but also other skills.

7-If yes, which of the following materials do you listen to?

a-TV programmes
b-Movies
c-On-line videos
d-Songs
e-Other, please specify.

Table 4.7

Type of Materials Students Listen to

Items	Number of students	Percentage
TV programs+movies+videos	20	18.51%
Movie+video+songs	18	16.67%
movies	14	12.96 %
online videos	13	12.03 %
Movies+online videos	12	11.11 %
TV programs+movies+videos+songs	9	8.33 %
Movies+songs	7	6.48 %
Songs	3	2.78 %
TV programms+movies	3	2.78 %
online videos+songs	3	2.78 %
TV programs+movies+songs	3	2.78 %
TV programms+online video	2	1.85 %
TV programms	1	0.94 %
Total	**108**	**100%**

Table 4.7 represents the percentage of the materials students listen to outside the classroom. All the students listen to English outside the classroom to varying degrees using different materials. Twenty students (18.51% representing the highest percentage) listen to 'TV programs, movies and videos'; eighteen students (16.67%) listen to 'movies, videos and songs'; 14 students (12.96%) watch only 'movies' and 12 (12.78%) only online videos. Only 9 students (8.33%) listen to all the materials, i.e. 'TV programs, movies, videos and songs'. On the other hand, only one student (0.94% representing the lowest percentage) listens to TV programs. Thus, the majority of them listen to all types of English materials outside the classroom.

8-How often do you listen to these materials?

a-Always ☐

b-Often ☐

c-Sometimes ☐

d-Rarely ☐

e-Never ☐

Table 4.8

Frequency of the Materials the Students Listen to

Responses	**Number of students**	**Percentages**
c-Sometimes	53	49.08%
b-Often	32	29.63%
a-Always	20	18.52%
d-Rarely	3	02.77%
e-Never	0	00%
Total	**108**	**100%**

Table 4.8 shows the frequency of the materials the students listen to outside the classroom. Almost half of the students 53 (49.08%) listen 'sometimes' to these materials; 32 (29.63%) listen 'often', and 20 (18.52%) listen always to them. However, only 3 students (2.77%) listen 'rarely' to these materials; and no one chooses 'never'.

9-Do you think that listening to spoken English is:

a-Very difficult ☐

b-Difficult ☐

c-Neither difficult nor easy ☐

d-Easy ☐

e-Very easy ☐

Table 4.9

Students' Perception of their Listening Difficulties

Responses	**Number of students**	**Percentage**
c-Neither difficult nor easy	71	65.75%
b-Difficult	15	13.88%
d-Easy	12	11.12%
e-Very easy	6	05.55%
a-Very difficult	4	03.70%
Total	**108**	**100%**

Table 4.9 represents the students' perception of their listening difficulties. More than half of the participants, 71 (65.75%), consider listening to spoken English 'neither difficult nor easy'. 15 students (13.88%) consider it 'difficult', and 12 students (11.12%) believe that listening to spoken English is 'easy'. Only 6 students (05.55%) believe it to be 'very easy', and 4 students (03.70%) consider it 'very difficult'.

10-When listening to spoken English, which of the following difficulties do you encounter? (Please circle all the elements that correspond to you).

a-Unfamiliar topics

b-New vocabulary

c-Pronunciation

d-Speed of delivery

Table 4.10

Difficulties Students Encounter When Listening to Spoken English

Items	**Number of students**	**Percentage**
New vocabulary+speed of delivery	24	22.22%
New vocabulary+pronunciation	15	13.88%
New vocabulary	14	12.96%
Unfamiliar topics+new vocabulary	11	10.18%
Unfamiliar topics	7	06.49%
Pronunciation+speed of delivery	7	06.49%
Speed of delivery	7	06.49%
Unfamiliar topics+speed of delivery	6	05.55%
Unfamiliar topics+new vocabulary+ pronunciation +speed of delivery	6	05.55%
Pronunciation	3	02.78%
Unfamiliar topics+new vocabulary+speed of delivery	3	02.78%
New vocabulary+pronunciation+speed of delivery	3	02.78%
Unfamiliar topics+pronunciation+speed of delivery	2	01.85%
Total	**108**	**100%**

Table 4.10 shows the difficulties students encounter when listening to spoken English. All the students report encountering difficulties when listening to spoken English. The highest percentage, representing 22.22% of students (24), identify 'new vocabulary' and 'speed of delivery' as the main cause of their challenge. Few students (13.88%) choose 'new vocabulary and pronunciation', while 14 students (12.96%) choose 'new vocabulary', and 11 students (10.18%) choose 'unfamiliar topics and new vocabulary' as the main reason for not understanding spoken English. There are only 6 students (5.55%) who report encountering all the difficulties previously mentioned. On the other hand, 3 students (2.78%) consider 'pronunciation' as the only difficulty they encounter when listening to spoken English; 3 students (2.78%) choose 'unfamiliar topics, new vocabulary and speed of delivery'; 3 students (2.78%) choose 'vocabulary, pronunciation and speed of delivery'. The lowest percentage (1.85%), i.e. 2 students,

choose ‘unfamiliar topics, pronunciation and speed of delivery. To sum up, a large number of participants consider new vocabulary, speed of delivery, and pronunciation as the main reasons for not understanding spoken English.

11-What are the elements of pronunciation you studied before coming to ENSB? (Circle all the elements you studied)

a-Consonants
b-Vowels
c-Word stress
d-Sentence Stress
e-Intonation
f-Modification of sounds at word boundaries

Table 4.11

English Elements of Pronunciation Students Studied Before Coming to ENSB

Items	**Number of stud**	**Percent**
Consonants+vowels+word+stress	41	37.96%
Consonants+vowels+word stress+intonation	25	23.15%
Consonants+vowels+word stress+sentence stress+intonation	15	13.88%
Word stress	8	07.41%
Consonants+vowels	7	06.48%
Consonants+vowels+word stress+sentence stress	6	05.56%
Word stress+intonation	3	02.78%
Word stress+sentence stress	2	01.85%
Sentence stress	1	0.93%
Consonants	0	00%
Vowels	0	00%
Intonation	0	00%
Modification of sounds at word boundaries	0	00%
Total	**108**	**100%**

Table 4.11 shows the English pronunciation elements students studied before coming to ENSB. Many students studied most elements of the English pronunciation except for the modification of sounds at word boundaries, which includes assimilation, linking,

elision, and reduced forms of function words. Forty-one students (37.96%, representing the highest percentage) studied 'consonants, vowels, and word stress'. Twenty-five students (23.15%) studied 'consonants, vowels, word stress, intonation'. Fifteen students (13.88%) studied 'consonants, vowels, word stress, sentence stress, and intonation', i.e., they studied all the elements of pronunciation but not the modification of sounds. Eight students (7.41%) studied only 'word stress'. Seven students (6.48%) studied 'consonants and vowels'. Six students (5.56%) studied 'consonants, vowels, word stress, and sentence stress'. Three students (2.78%) studied 'word stress and sentence stress'. One student (0.93%) studied only 'sentence stress'. No one studied 'consonants' (0.00%), 'vowels' (0.00%), or 'intonation' (0.00%).

12-If you circle modifications of sounds at word boundaries, which of the following aspects did you study?

a-Assimilation of sounds

b-Linking of sounds

c-Deletion of sounds

d-Reduction of function words

This question is directly linked to the previous one and is meant to discard any participant who studied these processes. It ensures that all participants, in both the control and experimental groups, were identical before the experiment began. None of the participants studied modifications of sounds at word boundaries, which include assimilation, linking, elision, and reduced forms of function words.

4.2 Comparing Results of Pre-test/ Posttest Perceptual Tasks Obtained by Experimental and Control Groups

4.2.1 Results Related to Assimilation

Participants were given two tasks to assess their ability to perceive sounds and words that underwent assimilation at word boundaries. The results of the two tasks are shown below.

✶ Part one: Sound Identification Task

• Comparing the Pretest Results

An independent-samples t-test was conducted to determine whether there is a difference in the perception of assimilation between the means of control and experimental groups on pretest (see Table 4.12 below).

The results indicate a non-significant difference between control group (M=0.5000, *SD*=.77093) and experimental group (M=0.4259, *SD*=.66167), [t (106) =.536, p=.593>.05]. The 95% confidence interval of the difference between the means ranges from [-.20003 to .34817] and do not indicate a difference between the two means of the sample. Based on these findings, it can be concluded that there is no significant mean difference in the perception of assimilation between the control and experimental groups on the pretest. Additionally, the effect size, as measured by Cohen's d, is 0.10, indicating a very small effect.

In summary, the data does not provide evidence for a significant difference in the perception of assimilated sound identification at word boundaries between the control and experimental groups on the pretest, as indicated by the non-significant t-test and small effect size.

Table 4.12

Descriptive Statistics of the Independent-Samples t-Test on Assimilation: Part One-Sound Identification (Pretest)

				Levene's Test for Equality of Variances		*t*-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig. tailed	Mean difference	Std. Error. difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**0.5000**	**.77093**									
Assimilation 1 Pretest				**1.262**	**.264**	**.536**	**106**	**.593**	**.07407**	**.13825**	**-.20003**	**.34817**
Experimental	**54**	**0.4259**	**.66167**									

- **Comparing the Post-test Results**

An independent-samples t-test was conducted to determine whether there is a difference in the perception of assimilation between the means of the control group and experimental group on post-test (see Table 4.13 below).

The results indicate a statistically significant difference between control group (M=1.2407, SD=*1.5418*) and experimental group (M=5.5926, *SD=1.20562*), [t(106)=-16.344, p=.000<.05]. The 95% confidence interval of the difference between the means ranges from [-4.87975 to -3.82396], indicating a significant difference between the two means in the sample. Based on these findings, it can be concluded that there is a significant mean difference in the perception of assimilation between the control and experimental groups on the posttest. The Cohen's d effect size is 3.14, indicating a very large effect.

Table 4.13

Descriptive Statistics of the Independent-Samples t-Test on Assimilation: Part One-Sound Identification (Post-test)

				Levene's Test for Equality of Variances		*t*-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**1.2407**	**1.5418**									
Assimlation 1 Posttest				**3.379**	**.069**	**-16.344**	**106**	**.000**	**-4.35185**	**.26627**	**-4.87975**	**-3.82396**
Experimental	**54**	**5.5926**	**1.20562**									

- **Comparing the Correct Answers per Item (on Assimilation) in Pretest and Post-test Results**

Table 4.14 below compares the pre-test and post-test results of the control and experimental groups regarding their ability to perceive sound modifications at word boundaries due to assimilation.

Table 4.14

Comparing the Results of Correct Answers per Item on Assimilation: Part One (Pretest and Post-test)

		Control group			**Experimental group**		
N◦	**Items**	**Pre-test**	**Post-test**	**Gains**	**Pre-test**	**Post-test**	**Gains**
1	goo**d p**oint	0	2	**2**	1	38	**37**
2	i**n B**ritain	0	2	**2**	1	42	**41**
3	ope**n p**rison	3	5	**2**	0	40	**40**
4	commo**n g**round	1	7	**6**	1	22	**21**
5	goo**d g**uys	0	6	**6**	1	33	**31**
6	ca**n c**arry	5	8	**3**	2	20	**18**
7	coul**d b**e	2	5	**3**	2	39	**36**
8	wan**t m**ore	4	9	**5**	3	14	**11**
9	ca**n't b**ear	2	8	**6**	1	15	**14**
10	ca**n b**e	10	15	**5**	11	39	**28**

The experimental group shows significantly higher gains across all items, indicating a strong positive impact from the intervention. Their highest gains are observed in items such as '*in Britain*' (41 points), '*open prison*' (40 points), and '*good point*' (37 points). The control group's highest gains are only 6 points in items like '*common ground*', '*good guys*', and '*can't bear*'. Despite both groups starting with very low initial scores, the experimental group achieved notably higher post-test scores across all items, reflecting a substantial enhancement in their ability to perceive assimilated sounds, while the control group showed only minor improvements. These results underscore the effectiveness of the intervention in significantly improving the experimental group's skills.

✶ **Part two: Word Identification Task**

- **Comparing the Pretest Results**

An independent-samples *t*-test was conducted to determine whether there is a difference in the perception of assimilation between the means of control and experimental groups on pretest (see Table 4.15 below).

The results indicate a non-significant difference between control group (M=5.6667, *SD*=2.65643) and experimental group (M=5.7037, *SD*=2.55232), [t(106)= -.074, p=.903>.05]. The 95% confidence interval of the difference between the means ranges from [-1.03094 to 95686], indicating no significant difference between the two means in the sample. Based on these findings, it can be concluded that there is no significant mean difference in the perception of assimilation between the control and experimental groups on the pretest. The Cohen's d effect size is 0.01, indicating a very small effect.

Table 4.15

Descriptive Statistics of the Independent-Samples t-Test on Assimilation: Part Two-Word Identification (Pretest)

				Levene's Test for Equality of Variances		t-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**5.6667**	**2.65643**									
Assimilation 2 Pretest				**.015**	**.903**	**-.074**	**106**	**.941**	**-.03704**	**.50131**	**-1.03094**	**.95686**
Experimental	**54**	**5.7037**	**2.55232**									

- **Comparing the Posttest Results**

An independent sample t-test was conducted to determine whether there is a difference in the perception of assimilation between the means of the control group and experimental group on post-test (see the Table 4.16 below).

The results indicate a statistically significant difference between control group (M=7.8148, SD=3.29708) and experimental group (M=12.1481, *SD*=2.64509), [t(106)= 7.533, p=.01<.05]. The 95% confidence interval of the difference between the means ranges from [5.4737 to -3.19291], indicating a difference between the two means of the sample. It can be concluded that there is significant mean difference in the perception of assimilation between control and experimental group on posttest. The Cohen's *d* effect size is 1.44, which is very large.

Table 4.16

Descriptive Statistics of the Independent-Samples t-Test on Assimilation: Part Two-Word Identification (post-test)

				Levene's Test for Equality of Variances		t-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**7.8148**	**3.29708**									
Assimilation 2 Posttest				**2.820**	**.096**	**7.533**	**106**	**.01**	**-4.33333**	**.57522**	**5.4737**	**-3.19291**
Experimental	**54**	**12.1481**	**2.64509**									

- **Comparing the Correct Answers per Item (on Assimilation) in Pretest and Post-test Results**

Table 4.17 shows the results of correct answers per item on assimilation (part two). Because of the high correct answer rates of some items on pretest, such as are '*back*', '*start*' and '*white*', the gains are small for both groups. Besides, there is improvement in the scores of all items on the post-test for both groups except for the word '*yesterday*', where the number of correct answers of the control group on posttest is lower than on pretest.

Although there is clear outperformance of the experimental group over the control group in all items, words such as '*wet*', '*did*' and '*gone*' have very low correct answer rates even after the training. This may be due to the fact that these words might be affected by the neighbouring words which render them unrecognizable.

It is important to mention that the participants found it difficult not only to recognize monosyllabic words (words that contain one syllable) but also polysyllabic words (i.e. words that contain more than one syllable) such as 'Brazil', 'covers' and 'yesterday'.

Table 4.17

Comparing the Results of Correct Answers per Item on Assimilation: Part Two (Pretest and Post-test)

		Control group			**Experimental group**		
N◦	**Items**	**Pre-test**	**Post-test**	**Gains**	**Pre-test**	**Post-test**	**Gains**
1	wet	1	3	**2**	5	11	**6**
2	paint	3	7	**4**	4	12	**8**
3	as	21	40	**19**	19	52	**33**
4	usual	28	45	**17**	26	52	**26**
5	did	0	1	**1**	0	4	**4**
6	Brazil	4	8	**4**	6	31	**25**
7	gone	1	2	**1**	4	10	**6**
8	back	44	51	**7**	40	52	**12**
9	haven't	10	15	**5**	12	34	**22**
10	paid	11	14	**3**	12	35	**23**
11	start	27	32	**5**	24	41	**17**
12	by	12	22	**10**	15	34	**19**
13	white	28	31	**3**	33	46	**13**
14	gate	12	16	**4**	17	39	**22**
15	seat	3	8	**5**	5	19	**14**
16	covers	5	12	**7**	8	19	**11**
17	but	22	30	**8**	20	49	**29**
18	you	29	41	**12**	21	52	**31**
19	had	17	22	**5**	16	31	**15**
20	yesterday	28	22	**-5**	21	33	**12**

4.2.2 Results Related to Linking

- **Comparing the Pretest Results**

An independent sample t-test was conducted to determine whether there is a difference in the perception of linking between the means of control and experimental groups on pretest (see Table 4.18 below).

The results indicate no statistically significant difference between control group (M=8.0370, *SD*=4.01865) and experimental group (M=8.1296, *SD*=3.33674), [t (106) = -.130, p=.897>.05]. The 95% confidence interval of the difference between the means ranges from [from -1.50184 to 1.31665] and does not indicate a difference between the two means of the sample. It can be concluded that there is no significant mean difference in the perception of linking between control and experimental groups on pretest. The Cohen's *d* effect size is just 0.02, which is very small.

Table 4.18

Descriptive Statistics of Independent Samples t Test on Linking (Pre-test)

				Levene's Test for Equality of Variances		*t*-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**8.0370**	**4.01865**									
Linking Pretest				**4.401**	**.038**	**-.130**	**106**	**.897**	**-.09259**	**.71081**	**-1.50184**	**.31665**
Experimental	**54**	**8.1296**	**3.33674**									

- **Comparing the Posttest Results**

An independent sample t-test was conducted to determine whether there is a difference in the perception of linking between the means of the control group and experimental group on post-test (see Table 4.19 below).

The results indicate a statistically significant difference between control group (M=12.8889, SD=4.72116) and experimental group (M=17.8704, *SD*=5.85371), [t(106)= -4.868, p=.000 <.05]. The 95% confidence interval of the difference between the means ranges from [-7.01149 to -2.95147], indicating a significant difference between the two groups. These findings suggest that there is a significant mean difference in the perception of linking between the control and experimental groups on the posttest. Furthermore, the effect size, as measured by Cohen's d, was a substantial 0.93.

Table 4.19

Descriptive Statistics of Independent Samples t Test on Linking (Post-test)

				Levene's Test for Equality of Variances		*t*-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**12.8889**	**4.72116**									
Linking Posttest				**2.980**	**.087**	**-4.868**	**106**	**.000**	**-4.98148**	**1.02339**	**7.01149**	**-2.95147**
Experimental	**54**	**17.8704**	**5.85371**									

- **Comparing the Correct Answers per Item (on linking) in Pretest and Post-test Results**

Table 4.20 indicates the correct answers for linking words on the pretest and posttest of the two groups. The items 'I', 'new', 'the', 'they', 'both', and 'of' have high correct answer rates on the pretest, resulting in small gains for both groups. This may be explained by the fact that some linking items, such as 'both of', are very frequent in speech, making them easier to recognize.

Table 4.20

Comparing the Results of Correct Answers per Item on Linking (Pretest and Post-test)

		Control group			**Experimental group**		
	Item	**Pre-test**	**Post-test**	**Gains**	**Pre-test**	**Post-test**	**Gains**
1	my	27	45	**18**	26	46	**20**
2	old	2	7	**5**	1	18	**17**
3	uncle	12	25	**13**	13	35	**22**
4	is	12	27	**15**	12	36	**24**
5	with	18	23	**5**	20	31	**11**
6	us	10	14	**4**	8	20	**12**
7	for	7	9	**2**	8	16	**8**
8	I	31	41	**10**	32	50	**18**
9	often	14	23	**9**	18	39	**21**
10	eat	1	6	**5**	4	12	**8**
11	an	2	5	**3**	1	11	**10**
12	egg	0	3	**3**	1	8	**7**
13	with	5	8	**3**	7	12	**5**
14	a	1	9	**8**	2	17	**15**
15	of	0	4	**4**	3	9	**6**
16	olives	0	3	**3**	1	12	**11**
17	in	21	34	**13**	11	36	**25**
18	wrote	0	1	**1**	0	7	**7**

19	to	0	0	**0**	0	6	**6**
20	us	0	2	**2**	0	9	**9**
21	left	23	39	**16**	24	47	**23**
22	out	3	7	**4**	2	14	**12**
23	new	28	40	**12**	28	44	**16**
24	address	4	16	**12**	3	20	**17**
25	like	6	8	**2**	2	15	**13**
26	a	2	7	**5**	3	19	**16**
27	bite	0	8	**8**	2	14	**12**
28	to	2	7	**5**	3	11	**8**
29	eat	0	1	**1**	3	7	**4**
30	might	20	26	**6**	21	41	**20**
31	earn	1	1	**0**	0	6	**6**
32	called	4	9	**5**	4	26	**22**
33	out	2	5	**3**	5	13	**8**
34	the	40	44	**4**	38	46	**8**
35	they	37	41	**4**	39	46	**7**
36	are	16	23	**7**	17	33	**16**
37	under	6	11	**5**	4	16	**12**
38	grab	6	12	**6**	6	15	**9**
39	both	34	51	**17**	32	51	**19**
40	of	37	51	**14**	35	51	**16**

Obviously, the gains of the experimental group are relatively higher than those of the control group. However, some words remain challenging for the majority of the students even after treatment. Linked words such as '*eat an egg'*, '*of olives'*, '*wrote to us*', '*bite to eat*', '*might earn*', and '*grab both*' have low correct answer rates, due to C-V linking (such as '*eat an egg*', '*of olives*', and '*might earn*') or V-V linking (such as '*to eat' and* '*to us*'), or identical C-C (such as '*bite* to' and '*grab both*').

To sum up, some linked words are more recognizable than others. This may have caused difficulty to EFL students.

4.2.3 Results Related to Elision

- **Comparing the Pretest Results**

An independent samples t-test was conducted to determine whether there is a difference in the perception of elision between the means of control and experimental groups on pretest (see Table 4.21 below).

The results indicate no statistically significant difference between control group (M=5.5370, *SD*=3.10637) and experimental group (M=5.8333, *SD*=2.52347), [t(106)= -.544, p=.588>.05]. The 95% confidence interval of the difference between the means ranges from [from -1.37607 to -.78348], suggesting no substantial difference between the two groups. Therefore, it can be concluded that there is no significant mean difference in the perception of elision between the control and experimental groups on the pretest. Additionally, the effect size (Cohen's d) is 0.10, indicating a very small effect.

Table 4.21

Descriptive Statistics of Independent Samples t Test on Elision (Pre-test)

					Levene's Test for Equality of Variances		t-test for Equality of Means						
		N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
												Lower	Upper
	Control	**54**	**5.5370**	**3.10637**									
Elision	**Pretest**				**1.189**	**.278**	**-.544**	**106**	**.588**	**-.29630**	**.54463**	**-1.37607**	**-.78348**
	Experimental	**54**	**5.8333**	**2.52347**									

- **Comparing the Posttest Results**

An independent-samples t-test was conducted to determine whether there is a difference in the perception of elision between the means of the control group and experimental group on post-test (see Table 4.22 below).

The results indicate a statistically significant difference between control group (M=7.6852, SD=3.20274) and experimental group (M=12.9259, *SD*=2.83410), [t(106)= -9.005, p=.000 <.05]. The 95% confidence interval of the difference between the means ranges from -6.39476 to -4.08672], indicating a difference between the two means of the sample. It can be concluded that there is significant mean difference in the perception of elision between control and experimental group on posttest. The Cohen's *d* effect size is 1.73, which is significant.

Table 4.22

Descriptive Statistics of Independent Samples t Test on Elision (Post-test)

				Levene's Test for Equality of Variances		*t*-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**7.6852**	**3.20274**									
Elision Posttest				**.768**	**.383**	**-9.005**	**106**	**.000**	**-5.24074**	**.58198**	**-6.39476**	**-4.08672**
Experimental	**54**	**12.9259**	**2.83410**									

- **Comparing the Correct Answers per Item (on elision) in Pretest and Post-test Results**

Table 4.23 indicates the correct answers of words whose last consonants are elided on the pretest and the posttest of the two groups. The items '*first*', '*Paris*', '*badly*', and '*just*' have high correct answer rates on pretest; the gains are therefore small for both groups.

Moreover, there is improvement in the scores of all items on the post-test for both groups, with a clear outperformance of the experimental group over the control group. However, words such as '*reached*', '*sixth's*', '*throne*', '*hold*', '*kept*', and '*cold*' have very low correct answer rates even after the treatment. All these words, except for the item 'throne', have final consonant elision, and that is why they are not recognizable to many students.

On the other hand, the items '*acts*', '*like*', '*lend*', and '*me*' have the highest gain rates. To sum up, the elision of some consonants in words final position may be challenging for many students to understand them.

Table 4.23

Comparing Results of Correct Answers per Item on Elision (Pretest and Post-test)

		Control group			**Experimental group**		
N	**Items**	**Pre-test**	**Post-test**	**Gains**	**Pre-test**	**Post-test**	**Gains**
1	first	42	53	**11**	40	54	**14**
2	girl	14	16	**2**	16	42	**26**
3	reached	3	4	**1**	1	9	**8**
4	Paris	34	34	**0**	35	51	**16**
5	acts	8	20	**12**	11	44	**33**
6	like	17	28	**11**	20	49	**29**
7	Sixth's	3	5	**2**	2	13	**11**
8	throne	4	4	**0**	2	8	**6**
9	hold	6	6	**0**	4	16	**12**
10	tight	11	18	**7**	13	30	**17**
11	kept	16	23	**7**	19	38	**19**
12	quiet	13	16	**3**	23	28	**5**
13	slept	23	29	**6**	21	42	**21**
14	badly	27	39	**12**	24	52	**28**
15	lend	2	9	**7**	1	33	**32**
16	me	5	18	**13**	7	41	**34**
17	cold	8	12	**4**	11	18	**7**
18	lunch	22	28	**6**	18	43	**25**
19	just	29	39	**10**	31	51	**20**
20	can't	12	14	**2**	16	36	**20**

4.2.4 Results Related to Reduced Forms of Function Words

- **Comparing the Pretest Results**

An independent sample t-test was conducted to determine whether there is a difference in the perception of function words between the means of control and experimental groups on pretest (see Table 4.24 below).

The results indicate no statistically significant difference between control group (M=3.9815, *SD*=3.13526) and experimental group (M=4.2963, *SD*=3.32872), [t (106) = -.506, p=.614>.05]. The 95% confidence interval of the difference between the means ranges from [from -1.54854 to .91891] suggesting no difference between the two means of the sample. It can be concluded that there is no significant mean difference in the perception of the reduced forms of function words between control and experimental groups on pretest. The Cohen's *d* effect size is 0.09, which is very small.

Table 2.24

Descriptive Statistics of Independent-Samples t Test on Reduced Forms of Function Words (Pretest)

				Levene's Test for Equality of Variances		*t*-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**3.9815**	**3.13526**									
Function Words Pretest				**.103**	**.749**	**-.506**	**106**	**.614**	**-.31481**	**.62227**	**-1.54854**	**.91891**
Experimental	**54**	**4.2963**	**3.32872**									

- **Comparing the Post-test Results**

An independent sample t-test was conducted to determine whether there is a difference in the perception of the reduced forms of function words between the means of the control group and experimental group on post-test (see Table 4.25 below).

The results indicate a statistically significant difference between control group (M=6.2593, SD=4.23010) and experimental group (M=11.4630, *SD*=3.70982), [t(106)= -6.796, p=.000 <.05]. The 95% confidence interval of the difference between the means ranges from [-6.72199 to -3.68541] and indicates a difference between the two means of the sample. It can be concluded that there is significant mean difference in the perception of the reduced forms of function words between control and experimental groups on posttest. The Cohen's *d* effect size is 1.30, which is very large.

Table 4.25

Descriptive Statistics of Independent-Samples t Test on Reduced Forms of Function Words (Post-test)

				Levene's Test for Equality of Variances		*t*-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**6.2593**	**4.23010**									
Function Words Posttest				**1.962**	**.164**	**-6.796**	**106**	**.000**	**-5.20370**	**.76566**	**-6.7219**	**-3.68541**
Experimental	**54**	**11.4630**	**3.70982**									

- **Comparing the Correct Answers per Item (on reduced forms of function words) in Pretest and Post-test Results**

Table 4.26 below presents the students' perception of the reduced forms of function words of each item. Some items such as '*should*' and '*to*' have high correct answer rates on pretest; therefore, the gains are small for both groups. These two words undergo the same phonological process, i.e. vowel reduction; and seem less likely to cause problems to the students.

Although the gains of the experimental group are obviously higher than those of the control group, some words remain unrecognizable for the majority of the students even after the training, such as '*am*', '*her*' and '*have*'. In fact, the low correct answer rates of '*am*' may be justified by the fact that this word undergoes vowel loss, whereas '*her*' and '*have*' undergo two phonological processes simultaneously, vowel reduction as well as consonant deletion which render them imperceptible. Such words seem more likely to cause problems to the students.

To sum up, many reduced forms of function words remain challenging to most students, even after training. For the control group, the majority of these words have low correct answer rates, in particular, the correct answers for the items '*shall*' and '*do*' are slightly reduced in the posttest.

Table 4.26

Comparing the Results of Correct Answers per Item on Reduced Forms of Function Words (Pretest and Post-test)

		Control group			Experimental group		
	Items	**Pre-test**	**Post-test**	**Gains**	**Pre-test**	**Post-test**	**Gains**
1	and	9	13	**4**	7	20	**13**
2	is	10	10	**0**	11	27	**16**
3	shall	1	0	**-1**	0	10	**10**
4	we	0	1	**1**	1	15	**14**
5	some	17	21	**4**	15	40	**25**
6	him	6	13	**7**	8	24	**16**
7	he	5	14	**9**	8	29	**21**
8	can	1	11	**10**	1	21	**20**
9	as	3	5	**2**	2	19	**17**
10	am	4	4	**0**	3	8	**5**
11	her	0	0	**0**	1	2	**1**
12	at	1	9	**8**	5	20	**15**
13	your	9	16	**7**	8	23	**15**
14	should	36	45	**9**	34	52	**18**
15	have	1	1	**0**	1	8	**7**
16	you	3	10	**7**	6	22	**16**
17	must	6	11	**4**	6	23	**17**
18	was	5	15	**10**	9	27	**18**
19	on	9	14	**5**	11	27	**16**
20	his	8	16	**8**	12	24	**12**
21	to	38	46	**8**	40	50	**10**
22	do	14	11	**-3**	16	30	**14**
23	are	12	17	**5**	7	33	**30**
24	of	5	9	**4**	5	18	**13**
25	them	2	5	**3**	4	19	**15**
26	were	10	21	**11**	11	28	**17**

4.3 Comparing Results of Pre-test and Posttest Listening Comprehension Tasks

- **Comparing the Pretest Results**

An independent sample t-test was conducted to determine whether there is a difference in listening comprehension between the means of control and experimental groups on pretest (see Table 4.27 below).

The results indicate no statistically significant difference between control group (M=12.8796, *SD*=4.47101) and experimental group (M=13.2870, *SD*=3.82223), [t (106) = -.509, p=.612>.05]. The 95% confidence interval of the difference between the means ranges from [from -1.99439 to 1.17957] and does not indicate a difference between the two means of the sample. It can be concluded that there is no significant mean difference in listening comprehension between control and experimental groups on pretest. The Cohen's *d* effect size is just 0.09, which is very small.

Table 4.27

Descriptive Statistics of Independent Samples t Test on Listening Comprehension (Pre-test)

				Levene's Test for Equality of Variances		t-test for Equality of Means						
		N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
												Lower	Upper
List	**Comp Pretest**	**54**	**12.8796**	**4.47101**	**1.660**	**.200**	**-.509**	**106**	**.612**	**-.40741**	**.80046**	**-1.99439**	**1.17957**
		54	**13.2870**	**3.82223**									

- **Comparing the Posttest Results**

An independent sample t-test was conducted to determine whether there is a difference in the perception of listening comprehension between the means of the control group and experimental group on post-test (see the Table 4.28 below).

The results indicate a statistically significant difference between control group (M=17.5556, SD=4.91308) and experimental group (M=24.1204, *SD*=4.03748), [t (106) = -7.586, p=.000 <.05]. The 95% confidence interval of the difference between the means range from [-8.28126 to -4.84837] and indicates a difference between the two means of the sample. It can be concluded that there is a significant mean difference in the perception of listening comprehension between control and experimental groups on posttest. The Cohen's *d* effect size is 1.45, which is very large.

Table 4.28

Descriptive Statistics of Independent Samples t Test on Listening Comprehension (Post-test)

				Levene's Test for Equality of Variances		*t*-test for Equality of Means						
	N	Mean	SD	F	Sig.	t	df	Sig.(2 tailed)	Mean Difference	Std. Error. Difference	95% Confidence Interval of the difference	
											Lower	Upper
Control	**54**	**17.5556**	**4.91308**									
List comp Posttest				**1.797**	**.183**	**-7.586**	**106**	**.000**	**-6.56481**	**.86538**	**-8.28126**	**-4.84837**
Experimental	**54**	**24.1204**	**4.03748**									

4.4 Results of the post-test questionnaire administered to the experimental group

This section presents the results from the post-test questionnaire administered to the experimental group, providing insights into students' attitudes toward the training.

1-**Do you think that listening to real spoken English is**

a-Extremely difficult?

b-Very difficult?

c-Difficult?

d-Slightly difficult?

e-Not difficult at all?

Table 2.29

Students' Perception of their Listening Difficulties to Spoken English

Responses	**Number of respondents**	**Percentage**
c-Difficult	32	59.25%
d-Slightly difficult	11	20.38%
b-Very difficult	6	11.12%
a-Extremely difficult	5	09.25%
e-Not difficult at all	0	00%
Total	**54**	**100%**

Table 4.29 represents students' perception of their listening difficulties to spoken English. More than half of the respondents 32 (59.25%) believe that listening to real English is 'difficult'; 11 students (20.38%) believe it to be 'slightly difficult'; 6 (11.12%) and 5 (09.25%) students believe it to be 'extremely difficult' and 'very difficult', respectively. On the other hand, none of the respondents considers listening to real English 'not difficult at all'.

It is worth to mention that in the pre-test questionnaire participants were also asked about their perception on the difficulty of listening to spoken English (see question 9). The two questions were not meant to be compared at the beginning of the study; however, the shift in students' responses before and after the experiment was puzzling. While both

questions aim to understand the difficulties students face in listening to spoken English, the second question (Q1) narrows down to their perception of listening to 'real' English.

In the pre-test questionnaire (see Appendix A), question 9 asks: "Do you think that listening to spoken English is: a) Very difficult, b) Difficult, c) Neither difficult nor easy, d) Easy, e) Very easy?" Students were required to rate their overall perception of listening to spoken English on a scale from very difficult to very easy. The results showed that the majority of students (65.75%) rate it as 'neither difficult nor easy,' indicating a neutral perception. However, in the post-test questionnaire (see Appendix F), question 1 asks: "Do you think that listening to real spoken English is: a) Extremely difficult, b) Very difficult, c) Difficult, d) Slightly difficult, e) Not difficult at all?" Students were specifically asked about their perception of listening to real spoken English. The results reveal that more than half of the respondents (59.25%) find it difficult. A smaller percentage finds it extremely difficult (11.11%) or very difficult (9.25%), while 20% perceive it as slightly difficult. More importantly, none of the respondents consider listening to real spoken English as not difficult at all.

Students' responses to the two questions before and after the experiment suggest a shift, likely due to their growing awareness of the differences between the English encountered in controlled or textbook settings and the English heard in real-life situations. They find it challenging to understand and adapt to the way people naturally speak English in daily life, as opposed to the organized and structured language typically presented in textbooks or classroom lessons. In other words, they recognize that natural, authentic conversations involve language use that significantly differs from the controlled environments they are accustomed to, making real-life spoken English harder to comprehend.

-Why? Please justify.

- **Reasons for listening difficulties**

Participants attribute their listening difficulties to many reasons, such as the complexity of listening depends on the topic discussed, the vocabulary used, speed of the speaker, pronunciation, and connected speech specifically.

- **Unfamiliar topics and words**

One common complaints students report when listening to English is the presence of 'unfamiliar words'. Participant 12 commented, "*I do not understand when there are unfamiliar words*." In fact, the unfamiliarity of vocabulary is generally associated with the unfamiliarity of topics; so if the topic of the listening content is familiar, most of the words it contains are easy to recognize, and vice versa. As Participant 36 noted, "*For me, it depends on the topic; when the topic is familiar I understand almost everything*."

- **Fast speech**

Some students find native speakers' speech to be fast and unclear. For example, Participant 11 said, "*Even if the words are familiar, it is difficult to understand native speakers because they speak fast*." Participant 43 noted, "*I do not understand anything except the words pronounced slowly*." The term 'fast speech' frequently appears in students' responses and is seen as a major barrier to comprehension in listening.

- **Connected speech**

Some students are able to identify their listening difficulty by making a link between fast speech and the modification of sounds that occur at word boundaries. Participant 6 remarked, "*Native speakers pronounce words fast and link them with others*." Participant 51 noted, "*They speak fast and often skip one or two sounds*."

In general, students believe that not understanding spoken English is due to connected speech processes. This view is shared by many participants. For example, Participant 12 said, "*Native speakers' speech sounds different; they drop some sounds and add others, which changes the pronunciation of some words*." Participant 16 noted, "*Some sounds are barely pronounced due to connected speech processes*." Participant 28 observed, "*Native speakers insert sounds within words*." Participant 31 mentioned, "*Words with altered final sounds become unrecognizable*." Participant 50 added, "*Some words are not pronounced clearly, and others are not pronounced at all*." This issue primarily concerns the reduced forms of function words.

- **No exposure to real natural speech**

Exposure to spoken English is the key point to the development of listening proficiency. Thus, the students who are not exposed to real language generally fail to understand it. For instance, Participant 4 said, "*We are not used to listening to native speakers in our daily life.*" Participant 17 mentioned, "*I need at least three times to understand spoken English.*" Because listening is difficult, it requires significant concentration and practice, especially for students who are not regularly exposed to the language, Participant 19 observed, "*It needs a lot of concentration and practice to improve our listening skills.*" Participant 30 added, "*We need many exercises to understand real spoken English more easily*."

- **Spoken language differs from written language**

The discrepancy between English spelling and pronunciation causes a lot of difficulty to nonnative listeners; it may even lead to confusion. As Participant 44 noted, "*Native speakers pronounce words differently from how they are written*."

✶ Reasons for listening ease

- **Regular Exposure**

The participants who think that listening to native speakers' speech is not difficult attribute their understanding of spoken English to their regular exposure to the language. Participant 15 said, "*For me, listening is not that difficult because I am used to watch a lot of American movies.*" Participant 54 also explained his/ her ease at understanding real English as follows:

> *I do not find it difficult since I have been exposed to English for quite a long time. I dedicate all my time to listening to English, and I always try to talk to English speakers. I clearly understand what they say, and I am able to communicate comfortably with them.*

Understanding a second or foreign language not only provides comfort but also gives students a sense of pride. For instance, when students can understand native speakers'

speech, it creates a positive feeling of pride: Participants 15 said, "I feel proud when I understand native speakers' speech."

2-According to you, is it important to identify every word to understand meaning when listening to English?

a-Extremely important

b-Very important

c-Important

d-Slightly important

e-Not important at all

Table 4.30

Importance of Identifying Every Word to Understand Meaning in Listening

Responses	**Number of students**	**Percentage**
d-Slightly important	23	42.60%
c-Important	20	37.04%
b-Very important	5	09.26%
e-Not important at all	4	07.40%
a-Extremely important	2	03.70%
Total	**54**	**100%**

Table 4.30 demonstrates the students' perception of the importance of identifying every word when listening to spoken English. Almost half of the respondents 23 (42.60%) think that identifying every word to understand spoken English is 'slightly important', 20 students (37.04%) think that it is 'important'; 5 (09.26%) and 2 (03.70%) students think it to be 'very difficult' and 'extremely important', respectively. However, only 4 of them (07.40%) think that it is 'not important at all'.

3-What do you do when a word in listening material is not recognizable?

a-You ignore the word and focus on the rest of the listening.

b-You try to understand the meaning of the word from the context.

c-You concentrate so much on the word that you miss the rest of the listening.

d-Other, please specify.

Table 4.31

Students' Attitudes towards a Missing Word in Listening Material

Responses	Number of students	Percentage
b-You try to understand the meaning of the word from the context.	42	77.78%
a-You ignore the word and focus on the rest of the listening.	7	12.97%
c- You concentrate so much on the word that you miss the rest of the listening.	5	09.25%
Total	**54**	**100%**

Table 4.31 shows the students' attitudes towards missing a word in listening material. The majority of the students (77.78%) try to understand the meaning of the missing word from the context; 7 of them (12.97%) ignore the missing word and focus on the rest of the listening; and only 5 (09.25%) of the respondents over concentrate on the missing word, and thus miss the rest of the message.

4-In a listening lesson, do you prefer that your teacher uses material that includes

a-simplified and well articulated speech? or
b-normal real speech?

Table 4.32

Students' Preference for the Material to be Used in Listening Classes

Responses	Number of students	Percentage
b-normal real speech?	36	66.66%
a-simplified and well articulated speech?	18	33.34%
Total	**54**	**100%**

Table 4.32 represents the students' preference for the material their teacher use in listening classes. More than half of the students (66.66%) prefer their teacher to use normal real English; whereas 18 of them (33.34%) prefer listening to material that is simplified and well articulated.

-Why? Please justify.

Below are the reasons why students prefer natural real speech or simplified and well-articulated speech.

✶ Reasons students prefer natural real speech

- **Listening to real language**

Most of the students prefer to listen to real English despite its difficulty. They believe that it is the speech that is used in daily life. Thus, Participant 36 said, "*It is the English we hear outside classrooms*". Participant 45 noted, "*I want to learn and understand the speech that is used by native speakers*". Participant 51 added, "*Real English is more useful to get familiar with native speakers' daily chat.*"

- **Effective way to improve listening comprehension**

Many students believe that the teacher's use of material that includes real English is an effective way to improve their listening skills. Participant 25 noted, "*It is difficult but it is the only way to understand real English*." Participant 32 added, "*I think the teacher had better use normal real speech even if it is difficult, but with time we will be able to understand it*". This view suggests that training on connected speech is still needed to improve students' listening skills. Participant 14 summarized the ideas previously mentioned as follows:

> *It is important to listen to real native speech. In order to understand native speech, it is important to train our ears to be able to understand real English. I know it is hard sometimes to catch all the words and understand all the meaning, but with training we will improve our listening skills*.

- **Teacher's role to simplify the listening task**

The role of the teacher remains crucial in developing students' English language proficiency in general, and in enhancing their listening skills in particular. She/he can play a vital role in facilitating the tasks and activities during a listening lesson. Therefore, the use of materials that include normal real speech is the choice of many students provided

that it is simplified. Participant 22 said, "*I prefer normal real speech, but when there is any difficulty, the teacher should try to simplify it*."

- **Plans for the Future**

A good command of English helps communicate better in real life situations. A person who is able to communicate efficiently may have better opportunities in life such as getting a job; this seems to be the goal of many students. As Participant 13 stated, "*I prefer real English to learn and practice more before going abroad*."

✶ **Reasons students prefer simplified and well articulated speech**

- **Priority to simplified materials**

Some students think that it is better to use clear, simplified materials at first-year degree level, and then use real English at higher levels, starting from the second year. Participant 17 said, "*It is better to deal with clear simplified materials for now and later deal with real speech*." Moreover, they think that English is a foreign language and therefore difficult to understand. As Participant 29 noted, "*Normal speech is very difficult, and it is not our first language*."

- **Formal language**

There is a perception among students that real English is informal and only spoken in specific contexts, such as communicating with family and friends. Participant 4 said, "*I prefer simplified and well-articulated speech because it is more formal, so I can understand every single word; otherwise I will be disappointed*." Thus, not understanding the spoken language can produce a negative feeling of being frustration, in contrast to the positive feeling of being proud and confident when comprehending spoken English, as mentioned previously by some participants.

- **Priority to understanding the content of listening**

Some students prefer careful speech in order to be able to understand all the content of listening. Participant 36 noted, "*Well-articulated speech is more useful for me to learn, and I will be able to understand clearly what they are saying.*" Besides, there is preference to focus mainly on getting ideas and information about particular topics rather

than on the way the message is delivered; which is why they choose well-articulated speech rather than natural speech is reflected in Participant 43's comment: "*Simplified and well-articulated speech gives us the opportunity to enrich our culture about some specific subjects*."

5-Is it important to include pronunciation instruction in listening lessons?

a-Extremely important

b-Very important

c-Important

d-Slightly important

e-Not important at all

Table 4.33

Importance of Including Pronunciation Instruction in Listening Lessons

Responses	**Number of students**	**Percentage**
a-Extremely important	22	40.75%
b-Very important	17	31.48%
c-Important	13	24.07%
d-Slightly important	2	3.70%
e-Not important at all	0	00%
Total	**54**	**100%**

Table 4.33 is about the students' attitudes to the importance of including pronunciation instruction in listening lessons. Almost half of the students (40.75%) believe that including pronunciation instruction is 'extremely important'; 17 (31.48%) of them believe that it is 'very important'; 13 (24.07%) of them believe that it is 'important'; and only 2 (3.70%) students think that it is 'slightly important', but no one thinks it 'not important at all'. Therefore, all the participants believe that including pronunciation instruction in listening lessons improves their listening ability.

-Why? Please justify.

Below are statements made by some participants who gave the reasons for their choice.

- **Improve listening skills**

Pronunciation instruction undoubtedly improves learners' listening skills; and the students are aware about it. Participant 1 said, "*It is important to acquire the right pronunciation in order to improve our listening ability."* Moreover, its effect may last for a long time, and the students will be able to notice what they have learned whenever they listen to English. As Participant 23 noted "*It will enable us to understand spoken English in the future.*"

- **Raise awareness**

The participants think that pronunciation instruction raises their awareness about how words are pronounced in context. Participant 3 said, "*It is important to know the correct pronunciation of words, so that when we listen to them, we recognize them without difficulty.*" Participant 16 added, "*Learning rules helps me to know why such a word is pronounced that way and that will help me to keep it in my mind.*" Although the question is meant to determine students' attitudes to the importance of including pronunciation instruction in listening classes in general, most of them restrict it to connected speech instruction. Participant 42 noted, "*We will be able to recognize words that are familiar but are pronounced differently in contexts*." Participant 54 added, "*We will be able to identify words whose sounds are linked, or added, or deleted*."

- **Improve speaking skills**

The objective of including pronunciation instruction is to improve intelligibility because a learner of a language is required to understand and to be understood when communicating with others. Therefore, pronunciation instruction can to improve not only listening skills but also speaking abilities. Participant 2 said, "P*ronunciation instruction will enable us to speak like native speakers and to understand what they say even if their speech is fast.*" Participant 18 emphasized its importance, stating, "*If our pronunciation is wrong, we cannot make people understand us when talking to them. It is a real problem*." Thus, the ultimate goal of pronunciation instruction is to help learners "*to speak like native speakers,*" as noted by Participant 37.

6-To what extent are you motivated to have training on connected speech processes?

a-Extremely motivated

b-Very motivated

c-Motivated

d-Slightly motivated

e-Not motivated at all

Table 4.34

Students' Motivation to have Training on Connected Speech Processes

Responses	**Number of students**	**Percentage**
b-Very motivated	19	35.19%
c-Motivated	15	27.78%
a-Extremely motivated	12	22.22%
d-Slightly motivated	5	09.25%
e-Not motivated at all	3	05.56%
Total	**54**	**100%**

Table 4.34 demonstrates the students' motivation to have training on connected speech processes. Over one third of the respondents (35.19%) feel "very motivated" to have training; 15 (27.78%) students feel 'motivated'; 12 of them (22.22%) feel 'extremely motivated'; whereas 5 (09.25%) and 3 (05.56%) of them feel 'slightly motivated' and 'not motivated at all', respectively. But it is worth noting that the number of participants who feel 'extremely motivated' is not very high (22.22%) to have training on connected speech processes.

-Why? Please justify.

Those participants who feel motivated to have training on connected speech processes have provided the following reasons:

- **Important to learn**

Learning connected speech processes is important and vital to understand native speakers. Many participants share this view. Participant 22 said, "*It is important to learn all the features of connected speech, so it can improve our level.*" Participant 30 added, "*It is so important in the process of learning the language.*" Participant 53 noted, "*I feel extremely motivated because it is an essential part of learning English.*"

- **Need for a training because difficult to learn**

Since native speakers' speech is difficult to understand, namely because of connected speech processes, students feel motivated to have training on these features. Participant 13 noted, "*When listening to connected speech, it is difficult to understand all the words because some of them are reduced, so I feel motivated to learn normal speech better than careful speech.*" Participant 28 added, "*Students of English should master connected speech since native speakers talk fast which is difficult for foreign learners to recognize all words*." Not understanding connected speech may be the main obstacle to effective listening. As Participant 37 observed: "*This is the thing that we need the most because when we hear connected speech, we get blocked*."

- **Helpful and beneficial**

Some respondents feel also motivated because they think that the training on connected speech is helpful and beneficial. Participant 1 said, "*I am extremely motivated because it is very beneficial."* Participant 7 added, *"The training helped me improve my listening and speaking skills*." Participant 19 noted, "*Because learning connected speech will make us speak fluently and understand most of any listening content.*" Participant 33 expressed a very positive attitude and high motivation towards the training, stating, "*With more learning and training, we can sound like native speakers*", even though this goal remains somehow unrealistic.

Not understanding spoken English causes frustration to many students: Participant 17 said, "*I sometimes feel frustrated and disappointed when I do not grasp the meaning; the training allows me to improve my level.*"

The following is an interesting description of Participant 28's experience before, during and after having training: from inability to understand spoken English, to being anxious and unmotivated, to finally being able to understand real speech.

> "*At first, when I heard the speech of native speakers, I was unable to understand what they were talking about; and that made me anxious and unmotivated to have the training, but later, I was able to understand some of their speech.*"

- **Enjoyable and exciting**

For some participant, the training was enjoyable and exciting: Participant 11 said, "*I find it enjoyable to listen and to find the missing words; it is not boring and we learn so much from it*." Participant 14 noted, "*For me, anything which develops my English is useful and almost all the time, I feel excited to learn new things.*" Participant 53 added, "*I am very excited to be able to understand native speakers and interact with them in their mother tongue.*"

- **Personal reasons**

In any learning process, students should set their own goals, such as acquiring some skills or improving one's knowledge, or making future plans, to make such learning effective and purposeful. Similarly, students' motivation to have connected speech training is also driven by personal goals. Participant 35 said, "*I want to improve my English; especially when I travel, it will help me understand native speakers.*" Participant 49 added, "*I used to struggle for misunderstanding native speakers conversations; now with the training I am trying my best to improve my listening skills.*"

For some participants the training was an opportunity to find out the extent to which they were able to understand real English speech and a way to improve their listening skills. Participant 24 noted, "*It shows me my weaknesses, and that makes me try to improve my skills.*" Participant 27 added, "*It helps me test myself, and find out if I have problems with listening comprehension.*"

7-To what extent is training on connected speech processes useful for your listening ability?

a-Extremely useful
b-Very useful
c-Useful
d-Slightly useful
e-Not useful at all

Table 4.35

Extent to which training on connected speech processes is useful

Responses	Number of students	Percentage
b-Very useful	26	48.15%
a-Extremely useful	17	31.48%
c-Useful	10	18.52%
d-Slightly useful	1	01.85%
e-Not useful at all	0	00.00%
Total	**54**	**100%**

Table 4.35 represents the extent to which training on connected speech processes is useful. Almost half of the respondents (48.15%) think that training on connected speech processes is 'very useful'; 17 (31.48%) of them think it 'extremely useful'; and 10 (18.52%) of them believes it to be 'useful'. Only one of them (01.85%) believe it to be 'slightly useful'.

-Why? Please justify.

Most of the themes below consistently appear throughout the participants' responses, such as understanding English speech, improving speaking skills, and developing awareness and familiarity.

- **Understand English speech**

Most of the participants think that the training is useful mainly because it helps them understand spoken English. Participant 10 said, "*It enables me to understand real English speech even though it is difficult*." Participant 23 noted, "*It helps to understand how words*

are pronounced." Participant 27 added, "*I can understand how words are spoken in connected speech.*" Participant 31 remarked, "*The ability to hear words clearly, allows me to follow any listening*." Participant 42 observed, "*I feel that my listening ability becomes better, and I can understand and recognize words better after the training.*"

- **Improve speaking skills**

Understanding and recognizing features of spoken English will no doubt lead to improvement of speaking skills as well. Participant 40 said, "*It is helpful because it enables me to understand spoken English and provides tips to sound more like native speakers.*" "*It helps me correct my pronunciation.*"

- **Focus on important information**

Participants stated that when they miss a word while listening; they may miss a whole idea. Therefore, connected speech training is meant to help recognize words so that they can focus on ideas and information within the listening rather than struggling to identify individual words. Participant 54 said, "*It is useful because it helps me focus on information.*"

- **Develop awareness and familiarity with sounds**

The purpose of teaching connected speech processes is to make students aware of them. Participant 18 said, "*It gives me ideas on how the words or the sounds can be pronounced when they are linked with other words*." Once students are aware of these processes, they then become more familiar with them. Participant 41 noted, "*It helps me to be familiar with native speakers' speech*." Participant 49 added, "*It helps train students' ears*."

- **Noticing some features of spoken language**

This theme seems crucial for the learning process. Indeed, many participants stated that when they are able to notice some features of spoken English, they will pay more attention to them. This suggests that becoming aware of and noticing sound change processes can lead to better recognition of these features. Therfore, the process of noticing any features of language is very important as it enables students not only to correct their mistakes but also to facilitate their acquisition of that language. Participant 12 said, "*The instruction on*

connected speech allows me to pay more attention on some forms." Participant 20 noted, "*It helps me to work hard to train my ears on how words are pronounced differently in contexts*." After noticing some features of spoken language, students are able to "*explain why some sounds change in some contexts,"* as Participant 34 remarked.

Finally, it is interesting to mention Participant 36's positive and encouraging view on the training in connected speech processes: "*Even if it is a bit difficult, at the end of each lesson, I learn some new forms.*"

8-To what extent are you satisfied with the training on connected speech processes?

a-Extremely satisfied
b-Very satisfied
c-Satisfied
d-Slightly satisfied
e-Not satisfied at all

Table 4.36

Extent of Students' Satisfaction with Training on Connected Speech Processes

Responses	**Number of students**	**Percentage**
c-Satisfied	24	44.44%
b-Very satisfied	13	24.08%
a-Extremely satisfied	9	16.66%
d-Slightly satisfied	6	11.12%
e-Not satisfied at all	2	03.70%
Total	54	100%

Table 4.36 shows the extent to which students are satisfied with the training on connected speech processes. Almost half of the participants (44.44%) feel 'satisfied' with the training; 13 (24.08%) feel 'very satisfied'; and 9 of them (16.66%) feel 'extremely satisfied" with the training. On the other hand, 6 students (11.12%) feel 'slightly satisfied' and 2 (03.70%) feel 'not satisfied at all' with the training. In general, the majority of the students feel 'either extremely satisfied', 'very satisfied', or 'satisfied' with the training.

9-If you are not satisfied, is it because

a-the rules of connected speech processes are complicated?

b-the activities on connected speech processes are not useful?

c-Your teacher's explanations of connected speech processes are difficult to understand?

d-Other, please specify.

Table 4.37

Reasons for Students' Dissatisfaction with the Training on Connected Speech

Responses	Number of students	Percentage
a-the rules of connected speech processes are complicated?	7	87.50%
b-the activities on connected speech processes are not useful?	1	12.50%
c-Your teacher's explanations of connected speech processes are difficult to understand?	0	00%
Total	**8**	**100%**

Table 4.37 displays the reasons why 8 subjects (among 54 participants) are not satisfied with the training on connected speech processes. It is clear from these figures that seven of them (87.50%) are not satisfied because they find the rules on connected speech processes complicated; whereas 1 only (12.50%) finds the activities on connected speech processes not useful.

10-To what extent are perceptual activities (such as dictation and gap-fill sentences) helpful in improving your listening ability?

a-Extremely helpful

b-Very helpful

c-Helpful

d-Slightly helpful

e-Not helpful at all

Table 4.38

Students' Evaluation of the Perceptual Activities Used in the Training

Responses	Number of students	Percentage
b-Very helpful	33	61.11%
a-Extremely helpful	14	25.92%
c-Helpful	6	11.11%
d-Slightly helpful	1	01.86%
e-Not helpful at all	0	00%
Total	**54**	**100%**

Table 4.38 shows the students' evaluation of the perceptual activities they received during the training on connected speech processes. More than half of the students (61.11%) think that the perceptual activities are 'very helpful'; 14 (25.92%) of them think they are 'extremely helpful', 6 (11.11%) believe them to be 'helpful'; only one (01.86%) thinks they are 'slightly helpful'. So, most of the students believe that perceptual activities are helpful in improving their listening ability.

-Why? Please justify

- **Increase concentration**

Although participants' responses are characterized by recurrent themes, such as improving listening and speaking skills and gaining familiarity with connected speech, the theme of concentration has not been mentioned frequently before. This is shown in many students' responses: Participant 13 said, "*They help us concentrate with the speakers*." Participant 38 noted, "*Such activities need a lot of concentration and practice which are essential steps to improve or learn anything we want.*" Participant 41 added, "*It helps to identify the exact words we are looking for with concentration; this improves our listening skills*."

- **Improve listening and speaking skills**

Improving listening and speaking is a theme that is repeated many times, and it is expected since this is the primary goal of connected speech training. Many participants believe that the perceptual activities help them improve their listening and speaking.

Participant 3 said, "*These activities do not only help us improve our listening skills but also our speaking skills*." Participant 18 noted, "*They help us understand native speakers' conversations*." Participant 22 added, "*Perceptual activities help train our ears a lot to understand speech more*." Participant 37 remarked, "*They help in training our ears to catch words and understand real English.*" Participant 38 commented, "*Perceptual activities are very useful to train yourself to be able to listen well and understand meaning*." Participant 44 observed, "*With perceptual activities, I can understand English much better*." Participant 48 said, "*They help me test my listening ability, hence I can improve it*." Participant 50 added, "*They enable us to pay more attention to pronunciation."*

It is important to consider Participant 11's response, which describes her difficulty to understand native speakers, her feelings of anxiety, and at the same time her positive feeling of being motivated to improve her listening skills: "*I often struggle to understand native speakers; this makes me feel anxious but also motivated to improve my listening skills*" (Participant 11).

- **Training effectiveness**

The respondents show positive attitudes towards the inclusion of perceptual activities in listening lessons which can be described as effective. Participant 3 said, "*My ears are able to identify some words that I could not identify before.*" Participant 16 noted, "*Because the missing words are the most difficult words, and the ability to recognize them means that we are improving*." Participant 27 added, "*I can catch the right words*." The respondents could identify two important goals of the training on connected speech processes in general and perceptual activities in particular: first, Participant 19 stated, "*They help understand the whole message,*" and second, Participant 35 remarked, "*They enable us to recognize the words or expressions when we hear them in other contexts*."

- **Gaining familiarity with native English**

Once again the theme of gaining familiarity is recurrent in the students' responses. Participant 3 said, "*It helps to become familiar to the way native speakers pronounce words in contexts.*" Participant 16 noted, "*I am more and more discovering how words are*

pronounced and I am getting used to English speech." Participant 51 added, "*You get more familiar with the way words are pronounced in contexts.*"

11-Do you think that the duration of the training on connected speech processes is appropriate?

Yes ☐ No ☐

Table 4.39

Students' Attitudes towards the Appropriateness of the Duration of the Training

Responses	**Number of students**	**Percentage**
Yes	43	79.62%
No	11	20.38%
Total	**54**	**100%**

Table 4.39 demonstrates the students' attitudes towards the appropriateness of the duration of the training on connected speech. The majority of the respondents (79.62%) think that the duration is appropriate, whereas the rest (20.38%) think that it is inappropriate, because the time spent on the training is not sufficient, and therefore should be increased.

12-If not, which of the following connected speech processes do you think you need more training?

a-Assimilation

b-Linking

c-Elision

d-Reduced forms of function words

Table 4.40

Connected Speech Processes Students Think they Need More Training

Responses	**Number of students**	**Percentage**
Reduced forms of function words	7	22.59%
Assimilation	6	19.36%
Linking	5	16.12%
Assimilation+Reduced forms of function words	3	09.67%
Linking+Reduced forms of function words	3	09.67%
Assimilation+Linking +Elision+Reduced forms of function words	3	09.67%
Elision	1	03.23%
Assimilation + Elision	1	03.23%
Linking+Elision	1	03.23%
Linking + Elision + Reduced forms of function words	1	03.23%
Total	**31**	**100%**

Table 4.40 shows the processes of connected speech participants think they need more training; and their number is 31 (57.40%) participants out of 54. Seven of them (22.59%) think that they need more training on reduced forms of function words, 6 (19.36%) of them on assimilation, and 5 (16.12%) of them on linking. On the other hand, only 3 (09.67%) respondents think that they need training on all processes of connected speech. This indicates that a significant portion of participants still recognize the need for targeted training on specific connected speech processes, with reduced forms being the most prioritized area.

13-Please, feel free to add any other comments on this topic.

Concerning the last open-ended question, the participants' comments are centred mainly on the effectiveness and duration of the training, as well as the difficulty they encounter when listening to native speakers in general and connected speech processes in particular. Some of their views may have been repeated because the last question allowed

them to elaborate on challenges they had already mentioned, such as the effectiveness of training or difficulties with connected speech.

- **Training effectiveness**

Many participants' comments indicate that the training was effective and attained some of its learning objectives: Participant 6 said, "*Connected speech training is so beneficial. Personally, I enjoyed each listening session*." Participant 11 noted, "*Pronunciation instruction is very helpful; it will help us improve our listening skills*." Participant 17 remarked, "*I think that I will need it not only in my teaching career but also in my daily life*." Participant 23 observed, "*Connected speech training helps to understand native speakers while speaking fast*." Participant 34 commented, "*Now, I have an idea about sound modifications in particular elision*." Participant 37 added, "*It helps to understand native speakers' speech without efforts*." Participant 42 said, "*The training helps me a lot; it motivates me to work hard and improve my listening skills*." Participant 47 felt, "*I learnt a lot from connected speech processes.*" Finally, Participant 53 stated, "*In the future, I will pay more and more attention to the sound modifications whenever I listen to English*."

In addition to students' satisfaction to the training, they also show their eagerness and willingness to reinforce what they have learned outside the classroom. Participant 21 said, "*I really like connected speech training; I am getting used to hear native speakers and I have decided to continue this process of learning during summer holidays.*" Participant 47 added, "*I will try to improve my understanding of connected speech through watching movies*." Extending learning beyond the classroom will enable students to develop their listening and speaking skills, so that their feelings of anxiety for not understanding native speakers will gradually be reduced.

- **Training duration**

Even though there is general satisfaction and positive attitude towards the training, some students believe that the amount of time spent on the training is not enough, as stated earlier. They think that they have still difficulties understanding connected speech processes. Participant 3 said, "*I think that I need more training in all connected speech processes so that I can develop my listening."* Participant 25 remarked, *"To improve listening, I need a lot of practice on connected speech*." Participant 36 noted, "*Even*

though I am satisfied with the duration of the training, I think I need more training on assimilation and reduction." Participant 39 added, "*I think that I need to practice more connected speech processes.*" Participant 47 stated, "*I think that we should have more exercises on all aspects of connected speech, in particular assimilation and linking, in order to improve our listening and speaking skills*."

Interestingly enough, only one respondent, Participant 18, points out to the importance of learner's own effort to understand connected speech processes. Participant 18 stated, "*Mastering connected speech processes needs time and learner's own effort to fully understand them and to be able to produce them as well."* Indeed, in any learning process learner's effort is the key role to improvement and success.

- **Challenging**

Many participants' responses revolve around the difficulty they have with connected speech processes, especially at the beginning of the training; and though some of them think that they have improved, others still struggle to understand these processes. Participant 6 commented, "*The exercises on connected speech were a little bit difficult but they allowed me to improve my listening skills*." Participant 11 added, "*Though connected speech training is difficult, it is very helpful not only to improve my listening skills but also my speaking skills*." Participant 29 noted, "*At the beginning of connected speech training, listening to real English was difficult, but with the training I become used to it and it becomes easier and even more enjoyable to learn.*" Participant 50 described it as "*interesting and challenging at the same time. It is hard and challenging because we need to focus the whole time to understand the content.*"

While some participants report having problems with all processes of connected speech, others think they have problems with only one or two processes. Participant 13 noted, "*The reduced forms of function words can be a bit difficult because of the way native speakers pronounce them.*" Participant 38 added, "*Function words are so important and understanding them means understanding native speakers' speech*."

Finally, it is worth to mention two interesting comments made by two participants, showing two completely opposing views. Participant 14 felt that the training should not have taken place due to its complexity, stating, "*I think it would be better if we did simple*

listening training because at this level [meaning first year] *it is hard to understand native speakers' speech*." In contrast, Participant 43 expressed her disappointment for not studying connected speech processes earlier, stating, "*Unfortunately, we were not used to listen to them beforehand. But I think with time, and with more training, we will be able to deal with them perfectly.*"

After presenting the findings related to students' training in connected speech processes, the following section explores teachers' perspectives on teaching listening, with a particular focus on connected speech processes.

4.5 Results of Teachers' Questionnaire

✶ **Background information**

Table 4.41

Teachers' Background Information

Teacher Participants	Gender	Teachers' rank	Teaching experience listening
1	Female	Assistant teacher	5
2	Female	Assistant lecturer	10
3	Female	Professor	3
4	Male	Assistant teacher	4
5	Female	Assistant teacher	5
6	Female	Assistant teacher	4
7	Male	Assistant teacher	11

Table 4.41 represents the teachers' background information, namely, their gender, rank and teaching experience of listening. There are 5 female and 2 male participants; five are assistant teachers, one is an assistant lecturer, and one is a professor. Their teaching experience of listening ranges from 3 to 11 years.

1-To what extent is it important to include pronunciation instruction to improve students' listening comprehension? Please, circle the right answers.

a-Extremely important

b-Very important

c-Moderately important

d-Slightly important

e-Not important at all

Table 4.42

Teachers' Attitudes to the Inclusion of Pronunciation Instruction in Listening Sessions

Responses	**Number of teachers**	**Percentage**
a-Extremely important	5	71.43%
b-Very important	2	28.57%
c-Moderately important	0	00%
d-Slightly important	0	00%
e-Not important at all	0	00%
Total	**7**	**100%**

Table 4.42 displays the teachers' attitudes to the inclusion of pronunciation instruction in listening sessions. All the teachers believe that including pronunciation instruction in listening classes is either 'extremely important' (5 teachers 71.43%), or 'very important' (2 teachers 28.57%) to improve students' listening comprehension.

-Why? Please justify.

The teacher participants mention the following advantages of including pronunciation instruction in listening classes.

- **Recognize and produce all elements of pronunciation**

Most teachers stated that the main goal of teaching pronunciation is to draw learners' attention to how sounds and words are produced, as well as how intonation and stress placement function, so that learners will be able to perceive and understand these elements, and eventually produce and use them in speech. Thus, for Teacher 2, "*It helps*

students develop their ability to produce and recognize English sounds, to use and identify stress, rhythm and intonation patterns properly." For Teacher 5, "It helps *students to identify and produce English sounds, stress, and intonation patterns in contexts.*" For Teacher 7, including pronunciation instruction is important "*For the sake of articulation in order not to be misunderstood by English native speakers in the future*".

- **Improve listening skills**

All teachers agree that including pronunciation instruction is no doubt an attempt to improve students' listening abilities, because through listening students can notice all the elements of pronunciation they learn. Therefore, according to Teacher 4 pronunciation instruction students "*to develop skills to understand and become familiar with the target language (native spoken discourse) which in turn empowers them to decode the message and improve their foreign language listening skills.*" For Teacher 5 "*It enables them to speak comfortably and therefore improve their listening comprehension*." According to Teacher 6, "*Pronunciation instruction is one of the pillars to improve listening. Moreover, it improves sound perception, recognition, and decoding.*"

- **Improve speaking skills**

Incorporating pronunciation instruction in listening lessons, according to some teachers, not only leads to the development of listening skills but also to the speaking skills, both of which are necessary for effective communication. For Teacher 3, a syllabus must "*include pronunciation instruction to ensure smooth communication: interaction between learners and the input (audio scripts), interaction between learners and their peers, and their teacher is guaranteed by pronunciation. Right pronunciation means correct understanding; it avoids communication barriers. In other words, listening comprehension leads to fluent speech production.*"

One of the respondents suggests to incorporate pronunciation instruction from the first day of listening courses to ensure that students are acquiring correct pronunciation. If the teacher neglects to teach pronunciation, students will not improve their speaking skills. "*It is crucial to include pronunciation instruction in listening classes from the very beginning of the courses, to make sure that students are learning the right pronunciation*

from the first day of listening. If the teacher neglects pronunciation teaching, students will not improve their speaking accuracy" (Teacher 1).

- **Build self-confidence**

Participants believe that being able to articulate and pronounce well encourages students to interact and communicate confidently. Teacher 2 stated, "*Pronunciation instruction also helps students to develop their self-confidence as they will be confident in their pronunciation and hence in their speaking and verbal exchanges, and this is important for English language learners in general and for future teachers of English in particular.*" In fact, the theme of building self-confidence was cited previously by several students.

2-Do you include pronunciation instruction in your listening classes?

a-Yes ☐ **b**-Sometimes ☐ **c**-No ☐

Table 4.43

Teachers' Inclusion of Pronunciation Instruction in their Listening Classes

Responses	Number of teachers	Percentage
Yes	3	42.86%
Sometimes	3	42.86%
Did not answer	1	14.28%
No	0	00%
Total	7	100%

Table 4.43 shows the teachers' responses regarding the inclusion of pronunciation instruction in their listening classes. Three of the participants (42.86%) choose the option 'yes'; three other teachers (42.86%) choose the option 'sometimes'; one of them (14.28%) did not choose any option. None of the teachers indicated that they never include pronunciation instruction in their listening classes, resulting in a 0% response rate for this category.

3-How confident are you when including pronunciation instruction in your teaching of listening? Please, circle the right answer.

a-Completely confident

b-Very confident

c-Moderately confident

d-Slightly confident

e-Not confident at all

Table 4.44

Teachers' Confidence in Including Pronunciation Instruction in Listening Classes

Responses	**Number of teachers**	**Percentage**
a-Completely confident	6	85.72%
b-Very confident	1	14.28%
c-Moderately confident	0	00%
d-Slightly confident	0	00%
e-Not confident at all	0	00%
Total	**7**	**100%**

Table 4.44 shows the teachers' confidence in including pronunciation instruction in their listening classes. Almost all the participants (85.72%) feel 'completely confident' in including pronunciation instruction in their teaching of listening, and one (14.28%) teacher feels 'very confident'.

4-If you include pronunciation instruction in your listening classes, which of the following aspects of English pronunciation do you include?

a-Consonants

b-Vowels

c-Syllable structure

d-Word stress

e-Sentence stress

f-Intonation

g-Connected speech (assimilation, linking, elision, reduced forms of function words)

Table 4.45

Elements of Pronunciation Teachers Include in their Listening Classes

Items	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Teacher 6	Teacher 7
a-Consonants	✶					✶	
b-Vowels	✶					✶	✶
c-Syllable structure		✶	✶			✶	
d-Word stress	✶	✶	✶		✶	✶	✶
e-Sentence stress		✶	✶	✶	✶	✶	
f-Intonation		✶		✶	✶	✶	✶
g-Connected speech processes		✶		✶	✶	✶	✶

Table 4.45 indicates the pronunciation elements teachers include in their teaching of listening. The focus on these elements varies among teachers. Some, like Teachers 2, 3, 4, and 5, focus only on suprasegmental features. Others, like Teachers 1, 6, and 7, address segmental features, such as consonants and vowels. Only Teacher 6 covers all elements of pronunciation in teaching listening, while others, like Teachers 1 and 3, cover three elements, Teachers 5 and 7 cover four, and Teacher 2 covers five elements. Additionally, all teachers, except for Teachers 1 and 3, incorporate connected speech processes into their listening lessons.

5-According to you, to what extent should a teacher of listening be aware of the English pronunciation in terms of rules? Please, circle the right answer.

a-To a very large extent

b-To a large extent

c-To a moderate extent

d-To some extent

e-Not at all

Table 4.46

Teachers' Attitudes towards Teachers' Awareness of English Pronunciation Rules

Responses	**Number of teachers**	**Percentage**
a-To a very large extent	5	71.43%
b-To a large extent	2	28.57%
c-To a moderate extent	0	00%
d To some extent	0	00%
e-Not at all	0	00%
Total	**7**	**100%**

Table 4.46 indicates the teachers' attitudes towards the importance of teachers' awareness of English pronunciation in terms of rules. Many teachers (71.43%) choose 'to a very large extent', while a smaller proportion of teachers (28.57%) 2 teachers choose 'to a large extent". None of the teachers selected the remaining options, i.e. options c, d and e.

6-When you design the content of the material you teach in your listening classes, do you take into consideration possible pronunciation problems (e.g. connected speech processes)?

a-Yes ☐ **b-**Sometimes ☐ **c-**No ☐

Table 4.47

Teachers' Consideration for Possible Pronunciation Problems

Responses	Number of teachers	Percentage
Yes	4	57.15%
Sometimes	2	28.57%
No	1	14.28%
Total	7	100%

Table 4.47 shows teachers' consideration for possible pronunciation problems when designing the content of the material they teach in listening classes. In the responses, 57.15% (4 teachers) selected 'yes, indicating a strong preference or agreement with the statement. 28.57% (2 teachers) chose 'sometimes', suggesting occasional agreement or practice. 14.28% (1 teacher) selected 'no', reflecting a minority view that does not align with the statement.

7-What do you do when a common word in the listening material you teach is not recognizable?

a-You just ignore it.
b-You just pronounce it again to make it recognizable.
c-You pronounce it and explain the rules of modifications the word has undergone.
d-Other, please specify

Table 4.48

Teachers' Attitudes to Unrecognizable Word in the Listening Material

Responses	**Number of teachers**	**Percentage**
c-You pronounce it and explain the rules of modifications the word has undergone.	5	71.42%
b-You just pronounce it again to make it recognizable.	1	14.29%
b-You just pronounce it again to make it recognizable + c-You pronounce it and explain the rules of modifications the word has undergone.	1	14.29%
a-You just ignore it.	0	00%
Total	**7**	**100%**

Table 4.48 indicates the teachers' attitudes to a common unrecognizable word in the listening material they teach. Five out of seven teachers (71.42%) prefer to pronounce it and explain the rules of modifications it has undergone. One teacher (14.29%) prefers to pronounce the word again to make it recognizable. One teacher (14.29%) chooses the two options previously mentioned. It is interesting to note that no teacher chooses to ignore a common word when it is not recognizable.

8-To what extent does the presence of connected speech processes interfere with students' listening comprehension?

a-To a very large extent

b-To a large extent

c-To moderate extent

d-To some extent

e-Not at all

Table 4.49

Teachers' Attitudes to the Interference of Connected Speech Processes with Students' Listening Comprehension

Responses	**Number of teachers**	**Percentage**
a-To a very large extent	5	71.43%
b-To a large extent	2	28.57%
c-To moderate extent	0	00%
d-To some extent	0	00%
e-Not at all	0	00%
Total	**7**	**100%**

Table 4.49 represents the teachers' attitudes to the interference of connected speech processes with students' listening comprehension. The majority of teachers (71.43%) think that they interfere 'to a very large extent'. A smaller proportion (28.57%) think they interfere 'to a large extent' with students' listening comprehension. None of the teachers selected the remaining options.

9-Which of the following connected speech processes are you familiar with in terms of rules?

a-Assimilation

b-Linking

c-Elision

d-Reduced forms of function words

Table 4.50

Teachers' Familiarity with the Rules of Connected Speech Processes

Responses	**Number of teachers**	**Percentage**
All options (a + b + c + d)	5	71.42%
d-Reduced forms of function words	1	14.29%
Assimilation+Elision (a + c)	1	14.29%
a-Assimilation	0	00%
b-Linking	0	00%
c-Elision	0	00%
Total	**7**	**100%**

Table 4.50 indicates the teachers' familiarity with the rules governing connected speech processes. Five out of seven (71.42%) teachers are aware of all the rules of connected speech processes, one (14.29%) teacher is aware of the rules of assimilation and elision, and one teacher (14.29%) is aware of the rules only of reduced forms of function words. None of the teachers selected the remaining options, i.e. Assimilation, linking and elision.

10-Do you include instruction on connected speech processes in your teaching of listening?

a-Yes ☐ **b-**Sometimes ☐ **c-**No ☐

Table 4.51

Teachers' Inclusion of Connected Speech Processes in their Teaching of Listening

Responses	**Number of teachers**	**Percentage**
Yes	3	42.86%
Sometimes	2	28.57%
No	2	28.57%
Total	**7**	**100%**

Table 4.51 demonstrates teachers' inclusion of connected speech processes in their teaching of listening. Three teachers (42.86%) choose the option 'yes', 2 teachers

(28.57%) choose the option 'sometimes', and 2 teachers (28.57%) choose the option 'no'. So, among the seven participants, only 2 teachers never include connected speech processes in their teaching of listening.

11-If No, you do not teach them because you think that these processes:

a-represent fast speech therefore does not suit students' level.

b-represent informal and uneducated speech therefore not academic.

c-represent different English varieties therefore cannot be taught.

d-represent complex rules therefore a teacher of listening is not required to teach them.

e-represent complex rules therefore a teacher of listening needs training to teach them.

f-represent speech that is addressed to native speakers therefore does not meet students' needs.

g-Other, please specify

The two teachers who selected the option 'No' in Question 10 answered that they do not incorporate connected speech processes into their listening instruction because they find the rules too complex, as reflected in their choice of option 'e'. Additionally, they expressed a need for training to teach these processes effectively, thus providing further reasons for their decision.

12-What are the challenges a teacher of listening faces when including pronunciation instruction in general and connected speech processes in particular?

- **Discrepancy between spelling and pronunciation**

Many teachers and learners of English agree on the fact that English pronunciation is challenging; this is due to the discrepancy between spelling and pronunciation, the irregularities of rules such as stress and rhythm, and the various modifications of sounds at word boundaries. As teacher 2 remarked, "*In general, there are a few aspects of English pronunciation that are challenging to teach, a few vowels that combine to make different sounds, various accents, stress patterns, rhythm, and intonation.*"

- **Problems with English stress**

According to Teacher 3, "*The tricky thing about teaching pronunciation is tied to the teaching of aspects of connected speech. A teacher needs more training to teaching these*

aspects. Another problem is related to the nature of English language itself as its forms change from one case to another, especially, stress in words or in sentence structures."

- **Challenges students face when learning pronunciation**

For foreign learners to master the English pronunciation they should make a great deal of effort, be highly motivated; and be regularly exposed to it. According to Teacher 2, in order to master the English elements of pronunciation, there is a need to "*a lot of exposure and motivation to learn, learners' attitudes and predispositions to learn, and understanding sound modifications.*" Among the challenges teachers encounter when including pronunciation instruction is dealing with learners who are unable to recognize native speakers' speech; they are also unable to recognize words and their spelling forms: "d*ifficulties to recognize native speakers' speech, difficulties at the level of identifying words or their spelling*" (Teacher 7).

In addition to mastering the English elements of pronunciation, teachers' challenges are to develop their learners' listening strategies as well as the processes of listening, bottom-up and top-down skills. Such strategies enable students to enhance their listening skills and will be able to understand any listening event. "*The first challenge is how to develop learners listening strategies. The second challenge is how to develop the processes of listening skills (top-down and bottom-up), more particularly, the bottom-up process to enable the learners to develop skills in how to use the language (pronunciation) to construct meaning and understand the message*" (Teacher 4).

One teacher, on the other hand, points out to another kind of challenge, linked to learners, which is students' limited vocabulary, "*Limitation of vocabulary*" (Teacher 5), a challenge that was identified in the literature in relation to foreign learners of English, in many parts of the world.

- **Time limitation**

Another potential source of challenge for teachers is time limitation. While Teacher 5 describes it as "*limited time allocated to listening*", for Teacher 3, if teachers focus on pronunciation guidelines, they risk to neglect crucial components of their listening course, such as understanding native speakers' speech, new topics, and new vocabulary. Thus, the

teachers' ultimate goal seems to develop students listening skills so that they can comprehend native speakers.

Thus, Teacher 3 explains that "*time limitations is another possible source of difficulty teachers are faced with; if teachers look for pronunciation rules, they may miss important aspects of their listening course which is supposed to train learners in listening to native speakers unfamiliar material. That is, the ultimate goal is to make them skillful in terms of listening strategies to understand native speakers.*"

- **Lack of materials**

Teacher 6 complains about "*lack of materials*". In fact, to teach listening efficiently, "*the availability of teaching materials and resources*" (Teacher 2) is undoubtedly necessary.

- **Including pronunciation instruction only when the need arises**

All the teachers mention the challenges they face when including pronunciation instruction in general and connected speech in particular in their listening lessons except for one who gives instruction only when needed. "*I do not design pronunciation activities in my listening classes; I mean I have never devoted a specific time for pronunciation instruction. When students come across difficult words or mispronounce new words, I stop them; I provide the correct pronunciation and ask them to repeat it many times loudly, individually and all the class together*" (Teacher 1).

13-How do you describe the listening curriculum of ENSB?

- **No common listening curriculum**

Many teachers state that there is no common listening curriculum to rely on: "*There is no unified curriculum for the listening module*" (Teacher 4), "*It is not unified*" (Teacher 3). Surprisingly enough, Teacher1 denies completely the existence of a listening curriculum, "*To my knowledge there is no curriculum."*

- **Inadequate curriculum**

Except for Teacher 7, who describes listening curriculum as "*acceptable*", all the respondents believe that it does not meet students' requirements and interests. This explains why most of them do not utilize it in their teaching of listening. Teacher 5

believes that "*It is not well-elaborated, it has to be reviewed*"; whereas Teacher 3 thinks that "*it cannot be assumed to suit the learners' needs or interests. It needs more action research and continuous professional development, to cater for learners' needs, level, and interest*."

- **Teachers design their own syllabus**

Since the participants think that the listening curriculum is inadequate, each one tries to design his/her own curriculum. "*I do not use it as it stands*" (Teacher 2), "*Each teacher has his own curriculum in teaching listening*" (Teacher 6). Moreover, in the absence of a suitable curriculum, each teacher finds it necessary to design a curriculum which corresponds to his/her beliefs as well as his/her students' needs, interests, and levels. So, "*each teacher is free to design his own syllabus according to his/her teaching perspectives and students' linguistic level*" (Teacher 1). "*To my experience, every teacher uses his own materials and his way to teach the listening module*" (Teacher 4). "*I do make amendments and I usually design my own syllabus that covers the overall guidelines of ENSB curriculum but it is much more tailored to my students' needs*" (Teacher 2).

14-To what extent are you satisfied with your teaching of listening? Please, circle the right answer.

a-Completely satisfied
b-Very satisfied
c-Moderately satisfied
d-Slightly satisfied
e-Not satisfied at all

Table 4.52

Teachers' Satisfactory with their Teaching of Listening

Responses	Number of teachers	Percentage
b-Very satisfied	4	57.14%
c-Moderately satisfied	3	42.86%
a-Completely satisfied	0	00%
d-Slightly satisfied	0	00%
e-Not satisfied at all	0	00%
Total	**7**	**100%**

Table 4.52 shows the teachers' levels of satisfaction with their teaching of listening. Four (57.14%) teachers feel 'very satisfied' and 3 (42.86%) teachers feel 'moderately satisfied'. None of the teachers selected the remaining options.

-Why? Please justify.

It is important to note that two respondents out of seven did not provide any answer to this question. Concerning the rest of the participants, the reasons for being satisfied or not being fully satisfied are stated below.

- **Personal reasons**

Two teachers express personal reasons for their partial dissatisfaction with teaching listening skills. Teacher 1 acknowledges having numerous ideas to enhance students' fluency and accuracy but feels constrained by time. "*Well as any teacher anxious to develop the fluency and accuracy of her/ his students, I have plenty of brilliant ideas to try them out with my students. However, I cannot find the necessary time to test my ideas in class*" (Teacher 1).

Teacher 2, on the other hand, has another personal reason for not being fully satisfied. According to him/her, being completely satisfied with what she/he does will hinder him/her from improving, and will stop him/her being motivated. "*I do make it a point to never be very satisfied with what I do as I want to keep improving and to make amendments and changes to my teaching style, my syllabus, etc, this keeps me going and seeking change constantly as students differ each year and within the same group. I am*

always cautious that if I tell myself, I am satisfied with what I am doing, I will not seek change and hence improvement" (Teacher 2).

- **Lack of teaching materials**

When materials for teaching listening are unavailable, teachers find it hard to predict whether the syllabus and materials he/she uses are the right alternatives to teach listening. Therefore, it is important to use resources that are well-designed, supported by research, to make sure that they suit learners' needs. This idea is well expressed by Teacher 3. "*Teaching listening requires well-designed materials, materials that are agreed upon by researchers and that are catered for learners' needs*."

- **Unfavorable conditions to teach listening**

Another reason why teachers of listening feel somehow dissatisfied is that the educational environment is not favorable to teaching and learning. Therefore, Teacher 3 thinks that "*the context of education is not helping (large classes with mixed ability learners, noisy corridors, non-availability of materials, data show, TV rooms, etc.*" In fact, a good listening class requires appropriate input as well as suitable teaching conditions to arrive to acceptable performance on the part of learners.

- **Achieving satisfactory goals**

Two respondents out of seven think that they are satisfied because of their teaching effectiveness which results in their students' overall achievement, in listening as well as in speaking. "*I focus more on the teaching of the process of listening skills to my students and their listening skill improvement generally is satisfactory*" (Teacher 4). "*My students develop and increase self-confidence in speaking without being shy or afraid of making mistakes*" (Teacher 5).

15-How difficult is it to teach listening? Please, circle the right answer.

a-Extremely difficult
b-Very difficult
c-Moderately difficult
d-Slightly difficult
c-Not difficult at all

Table 4.53

Teachers' Assessment of the Difficulty of Teaching Listening

Responses	Number of teachers	Percentage
b-Very difficult	3	42.86%
c-Moderately difficult	2	28.58%
a-Extremely difficult	1	14.28%
e-Not difficult at all	1	14.28%
d-Slightly difficult	0	00%
Total	**7**	**100%**

Table 4.53 shows the teachers' assessment of the difficulty of teaching listening. Three (42.86%) teachers think that teaching listening is 'very difficult, 2 teachers (28.58%) think it 'moderately difficult', one teacher (14.28%) finds it 'extremely difficult', and another one (14.28%) find it 'not difficult at all' to teach. Therefore, teachers' views about the difficulty teaching listening vary from 'extremely difficult' to 'not difficult at all'.

-Why? Please justify.

- **Listening lesson requires a lot of time and effort**

Despite the fact that many resources and teaching materials are available via Internet, it is not easy to plan a listening lesson. This is because teachers have to take into consideration some issues such as students' levels, needs, and interests. Therefore, much time and effort are needed in order to achieve such goals. "*It is not difficult compared to teaching other skills, but it is time and effort demanding. I mean with the easy access of Internet, there are countless audio resources, ready-made material to teach. Yet, the conscientious teacher has the challenging duty of selecting the material, designing and sequencing the pedagogical tasks according to a variety of parameters*" (Teacher 1).

- **Lack of teaching materials affects the way listening is taught**

As mentioned earlier, lack of teaching materials constitutes a source of listening difficulty for some teachers. "*Also, as I mentioned above, the lack of resources and materials*

impacts the way we teach" (Teacher 2). For Teacher 6, providing "*enough suitable materials such as data show, TV, loud speakers, Bluetooth, listening is easier to teach.*"

- **Difficult to teach listening to heterogeneous groups**

The biggest challenge that a lot of teachers face is teaching a group of students who have different levels. "*It is difficult to choose the material that suits the students' level*" (Teacher 5). So, teachers find it necessary to work hard to adjust their way of teaching in order to satisfy their learners, but this is not always attainable. "*I think it is very difficult as you often times work with heterogeneous groups of students that have different levels, different needs and aspirations. So it does take time to adjust your syllabus in the few first sessions and to keep addressing issues and needs as they arise*" (Teacher 2).

- **The nature of the English language**

There is a general feeling among these foreign learners of English, and even their teachers, that the English language is difficult to acquire, more precisely its pronunciation. This seems to impede the development of listening skills. Teacher 4 stated, "*This input sometimes acts as an obstacle for both teachers and learners, in terms of the difficulty of the input, regarding native speaker's voice, accent and intonation, which hinder the EFL listening skill development.*"

- **Listening is a pivotal skill**

Teaching listening skills for EFL learners is extremely challenging since other skills depend on it. As a matter of fact, learners acquire other language skills through the input they get from the listening skill. "*Within non-native educational settings, the teaching of the listening skills is really difficult because listening is primary or the main channel of FL acquisition which provides the learners with the target language input*" (Teacher 4).

- **Listening remains challenging without investigation**

Teacher 1 confessed that creating "*a thorough and well-thought-out listening training is not at all simple,*" and in order to be efficient in teaching listening, a teacher should adjust his/ her way of teaching. To do so, s/he needs to do on-going research in order to meet his/her learners' needs and to achieve successful results. "*To avoid difficulties, teachers*

should adapt himself to the changing conditions all over his career. Doing action research would serve him to cater for his learners needs and use a method that would help him reach good results, and these efforts would make teaching moderate in terms of difficulty (Teacher 3).

16-Do you use material that includes

a-simplified and well articulated speech?

b-normal real speech?

c-Other, please specify

Table 4.54

Material Teachers Use in Teaching Listening

Responses	**Number of teachers**	**Percentage**
b-Normal real speech	3	42.86%
a-Simplified and well articulated speech + normal real speech	3	42.86%
a-Simplified and well articulated speech?	1	14.28%
Total	**7**	**100%**

Table 4.54 indicates the listening material teachers use. Three (42.86%) out of seven teachers say they use 'normal real English'; three (42.86%) teachers use both 'simplified and well articulated speech' and 'normal real speech'; only one (14.28%) teacher uses 'simplified and well articulated speech'.

-Why? Please justify.

Each respondent explains the reasons for choosing the materials they use in their listening lessons, except Teacher 7, who provided no answer to this question.

- **Reasons for using authentic materials**

Teacher 6 states that **"**teachers have to choose authentic English", but without more explanation. However, Teacher 4 thinks that teaching materials should be "*as authentic as possible, and provide the learners with opportunities to acquire knowledge of the foreign*

language within a real communicative situation as possible as we can." Thus, students need to be exposed to authentic materials in order to acquire the English language in a genuine communicative setting, because the more the students are exposed to realistic and authentic materials, the more learning opportunities they obtain.

- **Exposing students to a variety of materials**

For some respondents, students of English should be exposed to different types of materials, "variety is important" (Teacher 5), so that they will not feel bored; and they will be exposed to a variety of spoken English. "*I generally try everything with my students to avoid monotonous listening lessons and to train their ears to understand quick and slow speech*" (Teacher 1). For Teacher 2, diversification in teaching materials is crucial and beneficial because this makes the language alive: "*I believe it is very important and useful to expose students to as many diverse materials as possible. This ranges from authentic to semi-authentic materials. I feel that I need to make the language alive and this is done through diversification of accents, materials, registers, etc*."

- **Reasons for using only well-articulated speech**

Teacher 3 is the only teacher who has a completely different view. According to her, materials that contain normal real speech should not be used in listening lessons because the latter is associated with speaking; when this happens students are likely to feel burdened with trying to understand real English containing a great deal of connected speech. Therefore, using well articulated speech may better encourage classroom interaction and debate. She rightly remarks: "*Because the listening course is related to the speaking course, it is not possible to use the material that includes a normal real speech, if so; students will be frustrated by the rules of normal real speech. So, including simplified and well articulated speech will stimulate classroom discussion and classroom interaction which is the second ultimate goal besides listening comprehension class.*"

17-Do you agree with the statement that listening is generally tested and not taught? Please, circle the right answer.

a-Strongly agree

b-Agree

c-Neither agree nor disagree

d-Disagree

e-Strongly agree

Table 4.55

Teachers' Agreement with the Statement that Listening is Tested and Not Taught

Responses	**Number of teachers**	**Percentage**
a-Strongly agree	3	42.86%
c-Neither agree nor disagree	2	28.58%
d-Disagree	1	14.28%
No answer	1	14.28%
b-Agree	0	00%
e-Strongly agree	0	00%
Total	**7**	**100%**

Table 4.55 displays the teachers' agreement or not with the statement that listening is generally tested and not taught. Three teachers (42.86%) 'strongly agree', 2 teachers (28.58%) 'neither agree nor disagree', one teacher (14.28%) 'disagrees', and one teacher (14.28%) did not provide any answer.

18-Do you include perceptual activities in your listening classes?

a-Yes ☐ **b-**Sometimes ☐ **c-**No ☐

Table 4.56

Teachers' Inclusion of Perceptual Activities in their Listening Classes

Responses	Number of teachers	Percentage
Yes	3	42.86%
Sometimes	2	28.57%
No	2	28.57%
Total	7	100%

Table 4.56 shows teachers' inclusion of perceptual activities in their listening classes. Three teachers (42.86%) choose the option 'yes', 2 teachers (28.57%) choose the option 'sometimes', and two more teachers (28.57%) choose the option 'no'.

-Why? Please justify.

Teachers use perceptual activities to achieve different learning goals. Teacher 6 uses them "*because it is essential*"; and for Teacher 2, "*Yes, I do and this depends on the learning objective*", but neither explained why they use them. Concerning the rest of the participants, the reasons vary.

- **To reinforce English pronunciation and spelling**

Only two participants admit using perceptual activities for pronunciation purposes; in particular, they use them to reinforce the pronunciation and spelling of the newly learned vocabulary. "*To tell the truth sometimes I find interesting dictation and gap filling activities in some course books with audio files, so I use them in my classes to consolidate the pronunciation and the spelling of the new vocabulary acquired in the lesson*" (Teacher 1). "*Generally, I include fill in the gap activities to check students' vocabulary in terms of understanding meaning, structure (spelling), the same does hold true for dictation*" (Teacher 3).

- **To assess students' comprehension of vocabulary and grammar**

Teacher 4 uses perceptual activities for specific purposes, such as grammar and vocabulary. According to him, when teaching listening, many other skills should be incorporated, but with a special emphasis on listening skills. "*I used filling gaps activities*

with very precise objectives (e.g. focus on grammar or vocabulary points) because within learner-centered methodology, we need to take into consideration the notion of integration. That is in a listening lesson, we can include other activities that deal with either language systems or other language skills, but with a focus on the objective of the listening skill lesson" (Teacher 4).

- **To support construction of meaning**

Two teachers, on the other hand, use perceptual activities as support to develop their students' listening comprehension. "*Perceptual exercises are used to test students' comprehension of the topic and their listening comprehension skills*" (Teacher 3). More precisely, they may be more beneficial for slow learners in gradually improving their listening comprehension so that they can figure out their meaning of a text or message, as Teacher 5 underscores: "*They help the students to develop their listening comprehension gradually especially for slow learners in order to be able to reconstruct meaning.*"

19-Please, feel free to add any other comment on this topic.

- **Teaching listening should be revisited**

Teacher 1 thinks that she has to reconsider her way of teaching listening, because listening is tested rather than taught. Moreover, she does not attribute students' proficiency in listening to classroom practices but rather to their regular ear training outside of the classroom. "*In fact, in my classes listening is tested and not taught, I have to reflect on teaching this challenging skill. The students who are good at listening do not owe good listening level to classroom practice but to their personal daily ear training outside classroom setting*" (Teacher 1).

- **Setting clear objectives and using different varieties of English**

For Teacher 2, teaching listening and pronunciation requires clear goals, one should avoid focusing too much on a standardized idealized version of the English language, in order not to frustrate learners and prevent fluency. "*One aspect that is also important when I teach listening and pronunciation is to have clear goals and not to focus too much on a standardized idealized variety of the English language so as to frustrate students and inhibit fluency*" (Teacher 2).

- **Teaching listening effectively depends on favorable conditions**

Appropriate conditions are necessary for teaching listening effectively; this was mentioned by some respondents. Teacher 3 points out to the following conditions: "*To have an effective listening class, there must be a (1) standardized input (well-designed) that cater for learners changing needs; (2) availability of materials to ensure students reception of knowledge; (3) time allotment, i.e., extending time to teach listening skills and strategies, and deepen the listening habits for learners.*"

- **Implementing standard curriculum for listening and speaking**

All teachers seem to agree that there is a considerable amount of work to be done to improve teaching listening. Then also state that teachers should meet more often to work together, in order to design a standard curriculum and syllabuses, and to share their experiences and benefit from them. "*Teachers need to meet in order to design a unified listening and speaking curriculum for the ENSB students*" (Teachers 4). "*Continuous professional development (action research) should be encouraged among teachers to highlight important points in teaching listening, and in particular, its related skills (speaking and writing) as well as pronunciation and vocabulary*" (Teacher 3).

The coming section is devoted to the results of the document analysis of the first-year listening and phonetics syllabi, currently in use in ENSB.

4.6 Results of Listening and Phonetics Syllabi Analysis

The document analysis of the first-year listening and phonetics syllabi involves a comprehensive review of their content, objectives, methodologies, assessments, resources, student engagement, feedback mechanisms, and the extent to which they cover connected speech processes.

4.6.1 Results of Listening Syllabus Analysis

The analysis of the first-year listening syllabus is summarized in Table 4.57 below, detailing the evaluation of content review, objectives evaluation, methodologies, assessments, resources, student engagement, and feedback mechanisms.

Table 4.57

Analysis of the First-Year Listening Syllabus

Elements	Analysis
1. Content Review	The syllabus covers a range of topics, including expressing likes and dislikes, describing objects, people, and places, and discussing past events and arguments.
2. Objectives Evaluation	The syllabus objectives are implied through the listed topics, but specific learning goals are not clearly defined.
3. Methodology Examination	The syllabus does not specify teaching methods or approaches, such as interactive activities, group work, multimedia use, or the integration of top-down and bottom-up approaches.
4. Assessment Analysis	The syllabus does not mention assessment methods or frequency (e.g., formative, summative).
5. Resource Assessment	There are no specific resources or materials mentioned, such as textbooks, audio recordings, and online tools
6. Student Engagement	The syllabus lists various topics but does not indicate how students will be engaged in learning these topics, such as student interaction and engagement through top-down and bottom-up strategies.
7. Feedback Mechanisms	There is no mention of feedback mechanisms in the syllabus, such as peer reviews, instructor comments, and self-assessment.

Table 4.57 analyzes the first-year listening syllabus through content review, objectives evaluation, methodologies, assessments, resources, student engagement, and feedback mechanisms (see syllabus in Appendix I). The syllabus covers a broad range of topics including expressing likes and dislikes, describing objects, people, and places, and discussing past events and arguments. However, it lacks specific details on how each topic is taught, which may affect the comprehensiveness of content delivery. The objectives of the syllabus can be inferred from the listed topics, but specific learning goals are not clearly defined. Without clearly stated objectives, it is difficult to determine if the course achieves its intended results.

The syllabus does not specify teaching methods or approaches, such as interactive activities, group work, multimedia use, or the integration of top-down and bottom-up approaches, including connected speech processes. The absence of detailed methodologies may hinder effective teaching and student engagement, as teachers may not have a clear guideline on how to approach each topic. The syllabus does not mention assessment methods (e.g., formative, summative). Without specified assessment methods, it is unclear how student progress and understanding will be measured, potentially impacting the effectiveness of the learning process.

The syllabus lists various topics but does not indicate how students will be engaged in learning these topics, such as through student interaction and engagement strategies. Without strategies for student engagement, there is a risk of passive learning and reduced student participation. There is no mention of feedback mechanisms in the syllabus, such as peer reviews, instructor comments, and self-assessment. The absence of feedback mechanisms may result in students not receiving the necessary guidance to improve their skills and understanding, which is critical for their development.

4.6.2 Results of Phonetics Syllabus Analysis

The results of the analysis of the first-year phonetics syllabus are presented in Table 4.58 below, detailing content review, objectives evaluation, methodologies, assessments, resources, student engagement, feedback mechanisms, and coverage of connected speech processes.

Table 4.58

Analysis of the First-Year Phonetics Syllabus

Elements	Analysis
1. Content Review	The syllabus covers fundamental aspects of phonetics, including the role of sounds, articulation, and prosody. It provides a broad overview but lacks specific attention to connected speech processes.
2. Objectives Evaluation	The syllabus does not explicitly state clear objectives. While it covers essential phonetic concepts, including vowel and consonant articulation, the objectives concerning practical application and connected speech processes are not mentioned.
3. Methodology Examination	The syllabus does not specify teaching methods or approaches, including methodologies such as practical exercises, phonetic transcription.
4. Assessment Analysis	The syllabus does not mention assessment methods and does not incorporate various assessment types (such as quizzes, practical exercises, oral exams).
5. Resource Assessment	There are no specific resources mentioned in the syllabus, such as textbooks, audio-visual materials, and online resources.
6. Student Engagement	The syllabus lacks details on how students will be actively engaged in learning activities, such as interactive tasks, phonetic drills, and practical applications.
7. Feedback Mechanisms	The syllabus does not mention feedback mechanisms, such as peer review, instructor comments, and self-assessment.

Table 4.58 analyzes the first-year phonetics syllabus by examining its content, objectives, methodologies, assessments, resources, student engagement, and feedback mechanisms (see syllabus in Appendix I). The syllabus covers essential phonetic concepts like the role of sounds, articulation, and prosody, which is briefly addressed through the study of word stress**.** However, it provides only a broad overview and does not focus specifically on connected speech processes, which could limit students' understanding of

natural speech flow. It lacks clearly stated objectives, making it difficult to assess whether the course achieves its intended learning outcomes, especially in practical applications such as practicing pronunciation skills, analyzing real spoken language to identify phonetic features, using transcription techniques and connected speech. This ensures that students not only understand the theoretical aspects of phonetics but also can effectively use this knowledge in real-world situations or practical tasks. The syllabus does not specify teaching methods or approaches, such as practical exercises, phonetic transcription, or how to integrate connected speech processes. This absence may hinder effective teaching and student engagement due to unclear guidelines.

Assessment methods are also not mentioned. Including various types of assessments (such as quizzes, practical exercises, and oral exams) is crucial for measuring students' understanding and progress. Without these, it is unclear how learning outcomes will be evaluated.

Additionally, there is no detail on how students will be engaged in learning activities, such as through interactive tasks or phonetic drills. Without these engagement strategies, there is a risk of passive learning and reduced participation. Finally, the syllabus does not mention feedback mechanisms like peer reviews, instructor comments, or self-assessment. The lack of feedback can hinder students' ability to improve their skills and understanding, which is vital for their development. The syllabus does not list any specific resources, such as textbooks, audio-visual materials, or online tools, which makes it difficult to ensure that students have the necessary materials for their learning.

Table 4.59 below summarizes below summarizes the strengths and weaknesses of the first-year listening syllabus.

Table 4.59

Strengths and Weaknesses of the First-Year Listening Syllabus

Strengths	Weaknesses
1. Comprehensive Coverage: The syllabus covers a wide range of topics, including expressing likes and dislikes, describing objects, people, and places, and inquiring about various topics, which are essential for developing listening skills. **2. Logical Sequencing:** Topics are organized logically, progressing from simple expressions to more complex descriptions and inquiries. **3. Practical Relevance:** The content is relevant to real-life communication, helping students apply their listening skills in various contexts.	**1. Lack of Specific Needs Analysis:** The syllabus does not specify how the topics were chosen based on the specific needs of first-year students. **2. Unclear Objectives:** Specific goals and objectives for each topic are not explicitly stated, making it challenging to measure student progress. **3. Engagement Methods:** The syllabus lacks details on teaching methods and student engagement strategies.

The table highlights both the strengths and weaknesses of the first-year listening syllabus. Strengths include comprehensive coverage of a wide range of topics, such as expressing likes and dislikes, describing objects, people, and places, and making inquiries, which are essential for developing listening skills. The topics are logically sequenced, progressing from simple expressions to more complex descriptions and inquiries. Additionally, the content is practically relevant to real-life communication, helping students apply their listening skills in various contexts. However, the syllabus has notable weaknesses, including the lack of a specific needs analysis to explain how topics were chosen based on the needs of first-year students, unclear objectives that make it challenging to measure student progress, and a lack of details on teaching methods and student engagement strategies.

Likewise, Table 4.60 below summarizes the strengths and weaknesses of the first-year phonetics syllabus.

Table 4.60

Strengths and Weaknesses of the First-Year Phonetics Syllabus

Strengths	Weaknesses
1. Foundational Knowledge: The syllabus provides a solid foundation in phonetics, covering key areas such as speech mechanisms, articulatory phonetics, and prosody. **2. Detailed Study:** Topics like allophony, aspiration, and velarisation offer in-depth knowledge of phonetic variations.	**1. Overly Technical:** The focus on technical details might be overwhelming for first-year students without sufficient practical applications. **2. Unclear Objectives and Outcomes:** The syllabus lacks clear objectives and measurable outcomes, making it difficult to assess whether students have achieved the desired skills. **3. Assessment Methods:** There is no mention of specific assessment methods, hindering the evaluation of student progress.

Table 4.60 highlights both strengths and weaknesses of the first-year phonetics syllabus. Strengths include comprehensive coverage of topics such as expressing likes and dislikes, describing objects, people, and places, and making inquiries, all of which are essential for developing listening skills. The topics are logically sequenced, progressing from simple expressions to more complex descriptions and inquiries, and the content is practically relevant to real-life communication, helping students apply their listening skills in various contexts. However, the syllabus has notable weaknesses, including the lack of specific needs analysis to explain how topics were chosen based on the needs of first-year students, unclear objectives that make it challenging to measure student progress, and a lack of details on teaching methods and student engagement strategies.

This analysis highlights that both listening and phonetics syllabi have comprehensive content but lack detailed methodologies, clear objectives, specific resources, and feedback

mechanisms. Addressing these gaps could significantly enhance the effectiveness of the syllabi in improving student learning outcomes as will be discussed in the next chapter.

Conclusion

This chapter has provided a detailed presentation of the results obtained from the analysis of pretest and posttest data, the questionnaires data administered to both students and teachers, and the document analysis of the first-year listening and phonetics syllabi. The comparison between the pretest and post-test results has served to assess the effectiveness of the intervention and identify any notable differences between the control and experimental groups. The responses to the questionnaires and the analysis of listening and phonetics syllabi have provided valuable insights. By incorporating multiple sources of data, this study has achieved a deeper insight and a comprehensive understanding of the research topic; it has also ensured reliability and validity of the findings through triangulation. This mixed-methods design was intended to highlight the robustness of this research study and the rigorous examination of our research questions. The following chapter will provide a comprehensive discussion of the research findings. It will also shed light on some implications for teaching and learning of connected speech processes.

Chapter Five: Discussion of Results and Pedagogical Implications

Chapter Five: Discussion of Results and Pedagogical Implications

Introduction

This chapter aims to discuss and interpret the research results presented in the previous chapter. It will cover key findings from each study instrument, including pretest and posttest results and responses from students' and teachers' questionnaires, to identify any potential relationships between the examined variables. The chapter consists of three sections. Section 5.1 examines the impact of perceptual training on participants' accuracy in various aspects of connected speech, such as assimilation, linking, elision, and reduced forms of function words, and evaluates its effect on overall listening comprehension as stated in RQ1, RQ2, and RQ3. It also explores students' attitudes toward explicit instruction in connected speech and teachers' perspectives on teaching listening and connected speech, as stated in RQ4. Additionally, it reviews how connected speech processes are incorporated into first-year listening and phonetics syllabi, as stated in RQ5. Section 5.2 addresses the study's limitations, while Section 5.3 discusses the implications and offers suggestions for teaching, including strategies for effectively teaching connected speech processes to EFL students.

5.1 Discussion of the Results

To reiterate, the main purpose of this study is to determine whether six months of explicit and systematic instruction on connected speech processes, namely assimilation, linking, elision, and the reduced forms of function words, can increase students' perception of these processes as well as their listening comprehension. This section discusses the results of the data analysis and attempts to answer the five research questions as well as the hypotheses stated at the beginning of the study, under each section.

5.1.1 Effect of Connected Speech Perceptual Training on Participants' Perceptual Accuracy Improvement

The first research question in this study is: *Does perceptual training in connected speech processes lead to an improvement in Algerian EFL students' perceptual accuracy of these processes at ENSB?*

To answer this question four sub-questions and hypotheses are formulated in order to deal with each process separately.

5.1.1.1 Effect of Perceptual Training on Participants' Accuracy Improvement in Assimilation

As described in Chapter four, Section 4.2, both the experimental and control groups completed a pretest on assimilation, which involved two perceptual exercises: sound identification and word identification.

a) No significant difference in the perception of assimilated sounds between the control and experimental groups prior to the treatment.

For the sound identification task which compared the pretest and posttest, the pretest results showed no meaningful difference between the control group and the experimental group. This indicates that, prior to the training; both groups had similar levels of performance in identifying sounds. The analysis further confirmed that this lack of difference was consistent and not due to random chance.

b) Significant effect of the treatment on the perception of assimilated sounds between the control and experimental groups.

After the treatment, the results demonstrated a significant difference between the control and experimental groups. This suggests that the treatment implemented with the experimental group effectively influenced the observed variable, leading to a meaningful change when compared to the control group.

In summary, the results indicated that the experimental intervention significantly influenced the perception of assimilated sounds, with the experimental group showing a

much higher mean score compared to the control group. The effect size is considered very large, indicating a substantial and meaningful difference between the groups.

Regarding students' perception of sound changes at word boundaries, the pretest results indicated that both the control and experimental groups had difficulty detecting these changes due to assimilation. Both groups demonstrated similar challenges in perceiving sound changes, as reflected by their low scores on the pretest. These results align with the findings of Sung et al. (2019) and Sung (2018), which revealed that Korean listeners exhibit lower perceptiveness or ability in detecting assimilated sounds in word-final consonants compared to native English listeners.

Following the treatment, improvement was observed in the posttest scores for both groups, with the experimental group showing better performance to the control group. This suggests that the intervention in assimilation positively impacted the ability to perceive sound changes.

Despite this overall improvement, some items remained challenging for students, indicating that there are still aspects of sound change perception that need further attention. Overall, the findings suggest that the treatment effectively enhanced students' ability to perceive sound changes at word boundaries, with the experimental group achieving greater improvement than the control group.

c) No significant difference in the perception of assimilated words between the control and experimental groups before the treatment.

As mentioned in Chapter 4 (Section 4.2) and concerning the word identification task, the results revealed that there was no significant difference between the control group and the experimental group on the pretest. This indicates that before intervention, both groups performed similarly in identifying words affected by assimilation. The lack of a significant difference suggested that the initial abilities of the two groups to perceive assimilation were comparable.

Based on these findings, it was concluded that prior to any treatment, there was no notable distinction in the perception of assimilation between the control and experimental

groups. This implies that both groups had a similar level of difficulty in recognizing assimilated words before the treatment was applied.

d) Significant effect of the treatment on the perception of assimilated words between the control and experimental groups.

On the posttest, the results indicated a notable difference between the control and experimental groups. This difference suggests that the intervention had a substantial impact on the variable being studied, with the experimental group showing a greater effect compared to the control group. The significant difference highlights that the treatment effectively influenced the observed outcomes, demonstrating that the intervention was effective.

Overall, based on these findings, it can be concluded that there is a significant difference between the control and experimental groups in their identification of words that undergo assimilation at word boundaries on the posttest. These results align with the findings of Baghrahi et al. (2014) and Gokgoz-Kurt (2016), both of which highlight the effectiveness of instruction in improving learners' perception of assimilation. Baghrahi et al.'s study involved 42 Iranian high school EFL learners, while Gokgoz-Kurt's research included 58 non-native English speakers in an ESL program in the USA.

Concerning identification of words that undergo assimilation, the results of correct answers per item on pretest were low except for some words which are, according to Vandergrift and Goh (2012), quickly and accurately recognized because they occur more frequently in English. Similar to those aforementioned findings, Zahedi et al.'s (2007) study emphasized the limitations in Iranian university EFL students' ability to accurately perceive assimilation. Besides, the participants in this study were unable to recognize not only the words that undergo assimilation in their final consonant but also the adjacent words, that is, the words that caused their modification. Thus, the scores of the words which underwent assimilation were lower than the scores of the adjacent words except for some words. On the other hand, the scores of the words that underwent coalescent assimilation were not as low as the scores of the words that underwent regressive assimilation. More importantly, students' scores revealed that they were not only unable

to recognize monosyllabic words (i.e. words that contain one syllable) but also unable to identify even polysyllabic words (i.e. words that contain more than one syllable).

Despite the fact that the experimental group's gains are obviously higher than those of the control group's gains, the majority of the students are still unable to recognize some words even after the training. This may be justified by the fact that these words are greatly affected by the adjacent words which render them unrecognisable.

Based on the above findings, the null hypothesis which suggests that *perceptual training in assimilation does not lead to an improvement in students' perceptual accuracy of this process*, is rejected. Instead, the alternative hypothesis which states that *perceptual training in assimilation leads to an improvement in students' perceptual accuracy of this process*, is accepted.

5.1.1.2 Effect of Perceptual Training on Participants' Accuracy Improvement in Linking

a) No significant difference in the perception of linking between the control and experimental groups before the treatment.

As described in Chapter (Section 4.2), the results of the cloze dictation task on linking indicated that there was no significant difference between the control and experimental groups prior to the treatment. This suggested that any observed differences between the means of the two groups are likely due to chance rather than any meaningful discrepancy. Additionally, the interval estimating the difference between the groups includes zero, reinforcing the conclusion that there was no meaningful difference between them. Overall, the findings indicated a very small effect, suggesting that any observed difference between the groups was unlikely to have practical significance.

In summary, the results of the cloze dictation task on linking demonstrated that there was no statistically significant difference between the control and experimental groups in terms of the outcome measure. The confidence interval further supported this absence of a meaningful difference, and the effect size indicated that any observed differences are minimal in practical terms.

b) Significant effect of the treatment on the perception of linking between the control and experimental groups.

On the posttest, the cloze dictation task on linking revealed a notable difference between the control and experimental groups. This indicated that the observed difference was attributable to the treatment rather than random variation. The results demonstrated that the experimental group performed significantly better than the control group, suggesting that the treatment had a substantial and meaningful impact. This difference was both statistically significant and practically relevant, highlighting the effectiveness of the intervention.

In summary, the findings of the cloze dictation on linking demonstrated a statistically significant difference between the control and experimental group. The 95% confidence interval further supported this conclusion, and the substantial effect size indicated a practical significance of the observed difference. The findings regarding participants' improvement in perceiving linking are consistent with the results reported by Alameen's (2014) who examined the effectiveness of audio-visual versus audio-only feedback in teaching consonant-to-vowel linking to ESL students at Iowa State University. The study, involving 45 participants from diverse linguistic backgrounds (Chinese, Korean, Malay, Spanish, Hindi, Portuguese, Cantonese, and Arabic), revealed that both feedback methods were effective. However, audio-visual feedback proved to be more effective and received more positive feedback from learners.

The correct answer rates per item in the pretest were very low for both groups, except for some words which had high correct answer rates. This is why the gains of these words were not significant on the post-test. However, even though the gains of the experimental group were comparatively greater than those of the control group, the majority of students still found some items challenging even after the treatment. These findings align with those of Hamouda and Aljumah (2017), who conducted their study in Saudi Arabia with 64 English major students. Their research revealed that one type of connected speech—intrusion, a form of linking—posed the greatest challenge for the participants.

Therefore, the null hypothesis which states that: *Perceptual training in linking does not lead to an improvement in students' perceptual accuracy of this process*, is rejected;

and the alternative hypothesis which states that: P*erceptual training in linking leads to an improvement in students' perceptual accuracy of this process*, is accepted.

5.1.1.3 Effect of Perceptual Training on Participants' Accuracy Improvement in Elision

a) No significant difference in the perception of elision between the control and experimental groups before the treatment.

The results of the dictation task on elision in the pretest, as described in Section 4.2, indicated that there was no significant difference in how the control and experimental groups perceived elision. This suggested that any variations observed between the two groups were not substantial and could be attributed to chance rather than to a meaningful difference. The lack of a significant difference further supported the conclusion that both groups had similar levels of elision perception before the treatment, indicating that the pretest did not reveal any noteworthy discrepancies in their ability to perceive elision.

Based on these findings, it was concluded that there was no significant mean difference in the perception of elision between the control and experimental groups on the pretest. It is important to note that the small effect size reinforced the lack of practical significance and suggested that the observed differences between the groups were within the range of chance variation.

b) Significant effect of the treatment on the perception of elision between the control and experimental groups.

On the posttest, the results of the dictation task on elision revealed a significant difference in the perception of elision between the control and experimental groups. This suggested that the experimental group showed notably better performance in perceiving elision compared to the control group. The observed difference was substantial and consistent with the results of the confidence interval analysis, which supported the conclusion that the treatment had a meaningful impact on the experimental group's perception of elision.

Based on these findings, it was concluded that there was a significant difference in the perception of elision between the control and experimental groups on the posttest.

The substantial effect observed suggested that the experimental intervention had a considerable impact on participants' ability to perceive elision. This strong effect indicated that the intervention was highly effective in enhancing the experimental group's perception of elision compared to the control group. These findings align with Baghrahi et al.'s (2014) study, which also reported similar results regarding the effectiveness of teaching elision to Iranian learners of English.

Regarding the correct answer rates per item on the pretest, there are certain words that had high rates of correct answers. Consequently, the gains for both groups on the posttest are relatively small. Furthermore, there had been progress in the scores of all items on the posttest for both groups with the experimental group clearly outperforming the control group. However, despite the treatment, some words that involved the elision of consonants across word boundaries posed a challenge to students. Likewise, the findings of Zahedi et al. (2007) and Hamouda and Aljumah (2017) consistently demonstrated that both Iranian university students and Saudi university students faced difficulties in perceiving elision, making it a significant challenge in connected speech.

Therefore, the null hypothesis which states that: P*erceptual training in elision does not lead to an improvement in students' perceptual accuracy of this process*, is rejected; and the alternative hypothesis which states that: P*erceptual training in elision leads to an improvement in students' perceptual accuracy of this process*, is accepted.

5.1.1.4 Effect of Perceptual Training on Participants' Accuracy in Reduced Forms of Function Words

a) No significant difference in the perception of reduced form of function words between the control and experimental groups before the treatment.

The results of the study, presented in the preceding chapter (Chapter four, Section 4.2), indicated that on the pretest, the cloze dictation task on the reduced forms of function words produced no significant difference between the control and experimental groups. This suggested that any observed differences in their ability to perceive reduced forms of function words were likely due to chance rather than a meaningful distinction. The confidence interval further supported this by indicating that the difference between the two groups was not substantial. Additionally, the very small effect observed indicated that

the differences in perception between the groups were minimal and not practically significant.

Therefore, based on these results, it can be concluded that there is no significant mean difference in the perception of the reduced forms of function words between the control and experimental groups on the pretest. This suggests that the two groups had a similar level of perception.

b) Significant effect of the treatment on the perception of reduced forms of function words between the control and experimental groups.

On the posttest, the cloze dictation task on function words revealed a significant difference between the control and experimental groups. The experimental group performed notably better, indicating a meaningful improvement in their ability to perceive reduced forms of function words compared to the control group. The confidence interval supported this finding by showing a substantial difference between the groups. The large effect size suggested that the observed difference was not only statistically significant but also practically significant, reflecting a strong impact of the treatment.

To summarize, the analysis indicated a significant difference in the perception of reduced forms of function words between the control and experimental groups. The experimental group outperformed the control group, providing evidence of the effectiveness of the intervention in enhancing participants' perception.

On the other hand, the results of the items included in the cloze dictation test, which examined the students' understanding of reduced forms of function words, indicated low performance for both groups during the pretest, with the exception of two items. The items that caused difficulty to most students underwent two phonological processes, vowel reduction and consonant deletion. Though, on posttest, the gains of the experimental group were obviously higher than those of the control group, some words remained challenging for the majority of the participants even after the treatment. This implies that although the experimental group showed greater improvement compared to the control group, some function words continued to pose difficulties to many participants. These words were challenging because they underwent both vowel reduction and consonant loss simultaneously, making them unrecognizable.

Accordingly, the null hypothesis which states that: *Perceptual training in the reduced forms of function words does not lead to an improvement in students' perceptual accuracy of this process*, is rejected; the alternative hypothesis which states that: *Perceptual training in the reduced forms of function words leads to an improvement in students' perceptual accuracy of this process*, is accepted.

After answering and discussing the four sub-questions about assimilation, linking, elision and the reduced forms of function words, it can be concluded that the perceptual training in connected speech processes did lead to some improvement in the experimental subjects' perceptual accuracy. Therefore, the null hypothesis formulated in the General Introduction which stated that: *Perceptual training in connected speech processes does not lead to an improvement in students' perceptual accuracy of these processes* is rejected and the alternative hypothesis which states: *Perceptual training in connected speech processes leads to an improvement in students' perceptual accuracy of these processes*, is accepted.

Hence, providing explicit instruction on connected speech processes has been found to have a positive impact on first-year students' perception. These results are consistent with the findings of several studies described in the literature review (Chapter Two, Section 2.10), including those by Brown and Hilferty (1986), Ahmadian & Matour (2014), Rahimi & Chalak (2017), Shimazaki (2021), Momen Omar & Pilus, (2022), and Zhong and Chen (2023).

The next section is devoted to the discussion of the effect of perceptual training of connected speech processes on listening comprehension

5.1.2 Effect of Perceptual Training of Connected Speech Processes on Listening Comprehension

To reiterate, Research Question 2 states: *Does perceptual training in connected speech processes─ assimilation, linking, elision, and reduced forms of function words─improve Algerian EFL students' listening comprehension?*

As presented in the preceding chapter (Chapter Four, Section 4.3), in order to examine the effect of perceptual training on students' listening comprehension, some listening activities were administered.

a) No significant effect of perceptual training in connected speech processes on EFL students' listening comprehension.

On the pretest, the results of the listening comprehension task showed no statistically significant difference between the control and experimental groups, indicating that performance was similar across both groups before the treatment. The confidence interval for the difference between the groups further reinforced the lack of a meaningful difference. The very small effect size suggested that any observed difference was likely to be negligible in practical terms.

In conclusion, based on the results and effect size, it was stated that there is no significant mean difference in listening comprehension between the control and the experimental groups on the pretest.

b) Significant effect of the perceptual training in connected speech processes on EFL students' listening comprehension.

On the posttest, the results indicated a significant difference in listening comprehension between the control and experimental groups. The experimental group demonstrated notably higher performance compared to the control group. This substantial difference suggested that the perceptual training had a meaningful impact on students' listening comprehension. This evidence strongly supported the conclusion that the intervention was effective in enhancing the experimental group's listening abilities compared to the control group.

The results indicate that the intervention implemented in the experimental group positively affected the participants' performance in listening comprehension when compared to the control group. These findings are consistent with studies by Brown and Hilferty (1986), Ahmadian & Matour (2014), Rahimi & Chalak (2017), and Shimazaki (2021), which demonstrate the positive impact of explicit instruction on connected speech features. Brown and Hilferty (1986) worked with 32 Chinese EFL students over

four weeks, while Ahmadian & Matour (2014) trained 40 Iranian learners. Rahimi & Chalak (2017) involved 52 Iranian participants and also explored their attitudes, and Shimazaki (2021) taught 82 Japanese university students for four weeks, all showing improved listening comprehension. Moreover, the findings of this study confirm the significance of explicit instruction, particularly in relation to connected speech processes, for enhancing comprehension, as noted by numerous ESL/EFL listening researchers (Avery & Ehrlich, 1992; Bilianska, 2019; Brown 1990; Brown & Crowther, 2023; Field, 2003, 2008; Kelly, 2000; Levis, 2018; Nation & Newton, 2009; Roach, 1991; Vandergrift, 2008; Vandergrift & Goh, 2012). These studies were discussed in the literature review, Chapter Two, Section 2.10.

Thus, the null hypothesis which states that: *Perceptual training in connected speech processes does not lead to an improvement in students' listening comprehension*, is rejected; and the alternative hypothesis which states that: *Perceptual training in connected speech processes leads to an improvement in students' listening comprehension*, is accepted.

The next section deals with the participants' attitudes towards explicit training on connected speech processes.

5.1.3 Students' Attitudes to Explicit Training on Connected Speech Processes

As a remainder, Research Question 3 states: *What are EFL students' attitudes toward explicit training on connected speech processes for improving listening in general, and connected speech learning and teaching in particular?*

It is worth recalling that the participants were asked twice about their perception of the difficulty of listening to spoken English, before and after the experiment through a questionnaire. Although these questions were not initially intended for comparison, the observed shift in students' responses makes it interesting to answer. The questions are: "Do you think that listening to spoken English is: a) Very difficult, b) Difficult, c) Neither difficult nor easy, d) Easy, e) Very easy?" (see appendix A for pre-test questionnaire, question 9) and "Do you think that listening to real spoken English is: a) Extremely difficult, b) Very difficult, c) Difficult, d) Slightly difficult, e) Not difficult at all?" (see Appendix F for post-test questionnaire, question 1). Both questions aimed to gain insight

into the challenges students encounter while listening to spoken English. However, the second question specifically focused on their perception of listening to natural real English.

As was explained in the previous chapter (Chapter Four, Section 4.4), before the experiment, a large number of students (65.75%) had a neutral perception concerning listening difficulty to spoken English in general. This suggests that they neither found it difficult nor easy. To explain these results, it may be possible that the listening material referred to by the students was closer to more formal and simplified versions of English.

However, after the experiment, a significant proportion of students (59.25%) found listening to natural spoken English difficult, indicating varying degrees of difficulty. Interestingly, a significant percentage of participants consider it slightly difficult, while smaller percentages find it extremely difficult or very difficult. But, none of the respondents perceived listening to natural English as 'not difficult at all'. This indicates that a considerable number of students face challenges when it comes to comprehending natural spoken English. In fact, students' difficulty to understand spoken English has been much discussed in the literature from the 1990's onwards. For Vandergrift (2008), learning to listen effectively can be particularly challenging due to its implicit nature and to the fact that it is ephemeral and transitory. Norris (1995) explained that EFL learners do not have the same advantages as native speakers in understanding spoken English because native speakers possess certain strategies that aid their comprehension, and which learners do not possess.

In Section 4.4 of the preceding chapter (Chapter Four), it was argued that this shift in students' perception observed before and after the experiment may be due to the distinction participants perceive between controlled English and natural real English. They struggle to understand and adapt to the natural way people speak English in daily life, as opposed to the organized and planned language they typically encounter in classroom settings, such as textbooks or structured lessons.

In their responses to both questions, the participants attributed their listening difficulties to various factors, including unfamiliar topics, new vocabulary, and fast speech; however, before the experiment they identified pronunciation in general to be the

cause of their difficulty, whereas after the experiment, they identified connected speech in particular to be the cause of their listening difficulty. But it is clear that both problems are linked.

Therefore, it seems that one reason for their listening difficulty is encountering unfamiliar topics and vocabulary. Students often report struggling to understand when they come across words that they are not familiar with. Similarly, as mentioned in Chapter Two, Section 2.8, studies by Alzamil (2021), Aoiz Pinillos (2021), Assaf (2015), Hamouda (2013), and Izzah and Keeya (2019) have also identified limited vocabulary as one of the main difficulties encountered by EFL learners in various contexts when listening to spoken English. This is because the unfamiliarity of vocabulary is closely linked to the unfamiliarity of topics. If the topic of the listening material is familiar to the student, they are more likely to recognize and understand most of the words being used. Conversely, if the topic is unfamiliar, it becomes more challenging for the student to comprehend the vocabulary used.

It was also mentioned that fast speech is another factor that contributed to participants' listening difficulties. Many of them felt that native speakers speak at a fast pace, making it difficult for them to follow and understand. They found it particularly challenging to comprehend native speakers unless the words were pronounced slowly. The perception of fast speech as a barrier to understanding listening was a common complaint among them. These findings align with the studies conducted by Alzamil (2021), Assaf (2015), Hamouda (2013), Izzah and Keeya (2019), and Nushi and Orouji (2020), which all supported the idea that fast speech presents difficulties for L2 speakers in comprehending spoken language (as discussed in Chapter Two, Section 2.8). Moreover, Brown, S. (2011) emphasized that fast speech can make it difficult for L2 speakers to understand what is being said because they have less time to recognize words and the articulation may suffer.

Connected speech also posed a significant challenge for the participants in relation to listening comprehension. They often noticed that native speakers pronounce words quickly and link them together. The feeling that native speakers skip or insert certain sounds makes it difficult for them to recognize and understand spoken English. This finding corroborates the studies conducted by Carney (2021), Gao (2014), Hamouda and

Aljumah (2017), Joyce (2019), Momen Omar & Pilus (2022), Wong et al. (2017), and Zoghalmi (2023), which all pointed to the challenges that their participants faced in understanding connected speech. As Dalton & Seidlhofer (1994) rightly remarked, connected speech processes can result in the reduction or modification of sounds in certain words, making them less clear or unrecognizable.

Some participants also attributed their listening difficulties to their lack of exposure to authentic, natural speech, a crucial factor in the development of listening proficiency. Numerous researchers have pointed out that the absence of regular exposure to spoken English often hinders students' ability to comprehend it (Brown, 1990; Field, 2003; Goh & Wallace, 2018; Norris, 1994, 1995; Tsui & Fullilove, 1998; Vandergrift, 2008; Vandergrift & Goh, 2012). These studies recommend that students engage in regular exposure to natural spoken English, in addition to practicing exercises, to facilitate easier comprehension.

Also, as noted in the preceding chapter (Section 4.4), few participants failed to distinguish between spoken and written language, leading to listening difficulties. The discrepancies between English spelling and English pronunciation give way to significant challenges for non-native listeners, as native speakers often pronounce words differently from how they are written, causing confusion. These observations were made by a number of researchers, including Brown (1990), Brown, S. (2011), Field (2003), Goh & Wallace (2018), Norris (1994, 1995), Richards (1983), Tsui & Fullilove (1998), Vandergrift (2008), and Vandergrift & Goh (2012), who highlighted the obstacles faced by foreign language learners in mastering bottom-up processing skills, such as understanding individual sounds, identifying word boundaries, and recognizing words in spoken language. These difficulties can significantly impede their overall listening comprehension ability.

On the other hand, very few "skilled" listeners found listening to native speakers' speech easy. They attributed their ease of understanding to regular exposure to the language, such as watching American movies or dedicating time to listening and speaking with English speakers. This finding is supported by Goh & Wallace (2018), who stated that skilled listeners effortlessly and rapidly understand spoken language due to their automatic decoding of the speech they hear. These participants felt confident in their

ability to understand and communicate comfortably with native speakers and they stated that understanding a foreign language not only gave them comfort but also a sense of pride.

To summarize, the participants' listening difficulty was justified by the presence of unfamiliar topics and words, fast speech, and connected speech. These factors made it challenging for them to understand and comprehend spoken English, requiring them to develop strategies and skills to overcome these difficulties.

Regarding the importance of identifying every word while listening to spoken English, respondents held varied opinions. A significant proportion viewed it as "slightly important", while a considerable number viewed it as "important". Additionally, a small group considered it "very important," indicating potential challenges in understanding spoken English. Notably, only a few students felt that identifying every word is "not important at all".

These findings underscore the significance of word recognition in listening comprehension, as highlighted by Field (2003) and supported by other researchers such as Brown (2011), Goh & Wallace (2018), Hedge (2000), Mendelsohn (2006), Rost (2001), and Vandergrift & Goh (2012). Word recognition is a fundamental aspect of comprehension, yet ESL/EFL learners often face challenges such as attributing the wrong sense to known words, failing to recognize phonetic variations, and struggling with segmenting words in connected speech. Field (2003) noted that even students with strong reading skills can struggle to recognize words in spoken contexts, further emphasizing the complexity of this skill.

Furthermore, participants described three strategies they employed when encountering difficulties in word recognition. The majority attempted to deduce the meaning of the unrecognized word from context, highlighting the importance of contextual cues in maintaining overall comprehension. However, a smaller proportion chose to ignore the missing word and focused on the rest of the material, prioritizing comprehension over word-level accuracy. This suggests that they believed understanding the broader message could compensate for the missing word. On the other hand, a small number of participants concentrated excessively on the missing word, to the point where

they missed the rest of the listening material. As noted by Goh & Wallace (2018), this overemphasis on word-level accuracy can hinder overall comprehension, preventing students from grasping the main message.

Overall, accurately recognizing words plays a significant role in ensuring full comprehension of spoken English. While many students rely on contextual clues to compensate for missed words, the ability to recognize words quickly and accurately is essential for grasping the full meaning of spoken material.

As mentioned in Chapter Four, Section 4.4, regarding students' preferences for the material used by their teacher in listening classes, more than half of the participants expressed a preference for natural real English in these classes. This indicates that a significant portion of them value exposure to authentic language and are aware that it may better prepare them for real-life situations where English is spoken naturally. However, a smaller group of participants, approximately one-third of the total, preferred simplified and well-articulated material because they found it easier to comprehend and grasp the content when it was presented in a more simplified and well-articulated manner.

In sum, the participants who preferred natural real speech believed that it accurately represents the English spoken in everyday life and that it is more useful for understanding native speakers and getting familiar with their daily conversations. They also believed that listening to real English is an effective way to improve their listening comprehension. They acknowledged that it may be difficult at first, but with practice and training, their listening skills can improve.

On the other hand, those who preferred simplified and well-articulated speech prioritize clearer and easier-to-understand materials, especially in their first year of degree study. They believed that real English is more difficult to comprehend and may be above their level. They also view real English as informal and only used in certain situations, while well-articulated speech more formal and easier to grasp. These views were underscored by Brown (1977), who pointed that learners often tend not to learn connected speech processes because they think that they are informal.

When considering authentic versus simplified materials, and the division between the students in terms of their learning preferences and needs, it is important to stress the importance of catering to the individual needs of students in order to create an inclusive and effective learning environment.

Thus, the results suggest that teachers should adopt a balanced approach in their listening classes, incorporating both natural English and simplified materials. This approach is supported by researchers, such as Mendelsohn (2006), Tomlinson (2003), and Vandergrift & Goh (2012). By diversifying the materials, teachers can cater to the varying preferences and needs of their students, offering authentic language exposure while ensuring comprehension and engagement

As was presented in the preceding chapter (Chapter Four), with respect to the participants' attitudes towards the inclusion of pronunciation instruction in listening lessons, it could be concluded that they have a positive view overall. The majority of them believe it important, with some even consider it extremely important. This indicates that they acknowledge the value of pronunciation instruction in improving their listening skills. There is a general agreement that pronunciation instruction positively impacts their ability to understand spoken English.

As stated in their responses, they believed that pronunciation instruction can increase their awareness of how words are pronounced in different contexts and help them recognize and understand words more easily. Learning pronunciation rules also helps them understand why certain words are pronounced the way they are and helps them remember them better. This finding aligns with the findings of Cauldwell (2018), Celce-Murcia et al. (2010), Dao et al. (2020), Kissling (2018), On-Soon (2019), Shockey (2011), and Yenkimaleki et al. (2022), who emphasized the importance of teaching pronunciation for improving listening skills in language classrooms.

Additionally, the participants stated that pronunciation instruction is not only important for listening comprehension but also for improving speaking skills. They believe that having good pronunciation enables them to speak like native speakers and be understood by others, while they recognize that incorrect pronunciation can be a barrier to effective communication. According to Celce-Murcia et al. (2010) and Shockey (2011),

teachers should prioritize helping learners understand fast, authentic speech in order to improve their listening skills, and that exposure to casual or informal English pronunciation is important for effective communication in real-life situations.

Among the pronunciation elements students were ready and motivated to receive training on are connected speech processes. As such, the majority of the respondents demonstrated a willingness and motivation to undergo training on connected speech processes. Although some participants were rather reluctant, they constituted a very small portion of the overall participants who recognized the importance of connected speech processes and were eager to improve their overall comprehension.

The participants who were willing to undergo training in connected speech processes provided various reasons. Firstly, they acknowledged its significance in understanding native speakers' English and enhancing their overall language proficiency. The challenge of comprehending native speakers, especially connected speech, further motivated them to seek training. They believed that mastering connected speech will not only improve their listening and speaking skills but also result in more effective communication. The participants found the training helpful and beneficial in enhancing their language abilities and fluency, and in bringing enjoyment and excitement as they learned new concepts and gained the ability to interact more effectively with native speakers. Secondly, participants wanted to have training on connected speech for personal reasons, such as preparing for travel abroad or simply for increasing their self-esteem by improving listening comprehension skills. Finally, connected speech training helped them focus on essential information during listening activities. By being able to recognize words in connected speech, they could concentrate on understanding the overall meaning rather than getting caught up in individual word identification.

The training in connected speech processes seems to have increased their awareness and familiarity with spoken English processes, providing insights into pronunciation patterns and enabling them to recognize and understand these patterns more easily. This heightened awareness allowed them to explain why certain sounds change in specific contexts. Brown (2023) suggested that teaching connected speech to EFL students has many benefits. It improves communication skills, complements grammar and vocabulary learning for fluency, works across all speech formality levels, helps understand native

speakers, adapts to native speech patterns, and increases confidence and comfort in communication, which aids language learning and meaningful interactions. Similarly, numerous researchers (Avery & Ehrlich, 1992; Brown 1990; Brown & Crowther, 2023; Field, 2003, 2008; Kelly, 2000; Levis, 2018; Nation & Newton, 2009; Roach, 1991; Vandergrift, 2008; Vandergrift & Goh, 2012) highlighted the importance of explicitly instructing students on connected speech processes. Such instruction is pivotal for enhancing students' grasp of natural speech complexities, refining their listening comprehension, and facilitating effective communication in real-life contexts.

Regarding students' satisfaction with connected speech training, the majority of them expressed satisfaction. These results are consistent with the findings of Rahimi & Chalak (2017), who reported a positive attitude among the students who benefitted from this type of instruction. Conversely, only a few participants were not satisfied with connected speech training. Among the 54 participants involved in the present study, 8 students only were not satisfied because of complicated rules of connected speech processes as the main reason for their dissatisfaction. One participant found the activities related to connected speech processes to be unhelpful. Overall, it was concluded that the majority of the participants showed a large degree of satisfaction with the training on connected speech processes

As reported in Section 4.4 of the preceding chapter, and concerning the participant' attitudes towards the perceptual activities they received during the training on connected speech processes, the majority believed that they were beneficial in improving their listening ability. Overall, this finding suggests that incorporating perceptual activities on connected speech processes is advantageous for students who wish to enhance their listening skills.

The participants provided a number of reasons for their choices. Their responses indicate that these activities helped them focus on the speakers, suggesting active engagement in the learning process, a crucial aspect for effective learning and comprehension. While the theme of concentration was not as recurring as others, the participants consistently addressed the theme of improving listening and speaking skills. They acknowledged that the perceptual activities not only enhanced their listening comprehension but also contributed to their speaking abilities. Additionally, the students

expressed positive attitudes, demonstrating their beliefs in the effectiveness of these activities. They specifically mentioned improvements such as increased ability to recognize previously unclear words and understand complete messages. Furthermore, gaining familiarity with native speakers' pronunciation stood out as a frequently mentioned option. The participants stated that they value the opportunity to become more familiar with different ways words are pronounced in various contexts, which ultimately improved their overall understanding of English speech.

These findings align with many researchers, including Brown (1990), Field (2003, 2019), Goh & Wallace (2018), Norris (1994, 1995), Richards (1983), Tsui & Fullilove (1998), Vandergrift (2008), and Vandergrift & Goh (2012). These researchers also found that perceptual activities help develop bottom-up skills, such as discriminating sounds, recognizing words and stress patterns, and understanding the impact of phonetic variations and reduced forms on segmentation and comprehension. The mastery of the phonological code is considered fundamental, and perceptual activities can enhance learners' understanding of sounds and phonological rules.

Although the majority of the participants believed that the duration of the training was appropriate, more than half of them (31 out of 54) felt that they needed more training in connected speech. In particular, they sought further training on the reduced forms of function words, assimilation and linking. Additionally, very few students felt they needed training in all processes of connected speech. In summary, a significant portion of the participants believed they could benefit from additional training in specific aspects of connected speech, particularly assimilation and the reduced forms of function words.

From the analysis of the participants' comments, it can be concluded that they generally found the connected speech training to be effective and beneficial for improving their listening skills. They appreciated the instruction on pronunciation and sound modifications, as it helped them understand native speakers (on audiotapes), especially when they speak quickly. They also expressed their motivation to continue learning and practicing connected speech outside of the classroom, such as through watching movies. However, some participants felt that the duration of the training was not sufficient for them to fully understand and master connected speech processes. They believed that more practice and exercises are needed, particularly on assimilation and reduction. They also

highlighted the challenging nature of connected speech processes, especially in the beginning of the training. Some reported improvement in their listening and speaking skills, while others still struggled. Others found specific processes, like the reduced forms of function words, to be difficult due to their untrained ear to understand native speakers' pronunciation.

The next section discusses teachers' attitudes towards teaching listening in general and connected speech processes in particular.

5.1.4 Teachers' Attitudes towards Teaching Listening in General and Connected Speech Processes in Particular

Research Question 4 states: What are Algerian EFL teachers' attitudes towards teaching listening in general and connected speech in particular?

As mentioned in Chapter Four, Section 4.5, all the teachers believed that including pronunciation instruction in listening classes is very important, highly valued and considered essential for improving students' listening comprehension. This suggested a unified agreement among the teachers on the significance of pronunciation instruction in listening classes.

According to the teacher participants, including pronunciation instruction in listening classes offers several advantages. Firstly, it allows learners to recognize and produce all elements of pronunciation. By teaching the production of sounds, stress placement, and intonation patterns, students can develop their ability to understand and use these elements in their speech. Secondly, it improves listening skills as students become more aware of pronunciation while listening. This helps them decode messages and enhances their overall listening ability. Thirdly, incorporating pronunciation instruction also improves speaking skills. By ensuring smooth communication and correct understanding, pronunciation instruction leads to fluent speech production. Finally, it helps build self-confidence among students, as they become more confident in their pronunciation and verbal exchanges. This is particularly important for English language learners and future teachers of English.

Regarding whether the teachers include pronunciation instruction in their listening classes, some of them did it, while others did it sometimes or not at all. Furthermore, nearly all the teachers felt completely confident in their ability to effectively teach pronunciation. This high level of confidence among teachers indicated their belief in the importance of incorporating pronunciation instruction in their listening classes. These findings indicate that the majority of the teachers surveyed possess a high level of confidence in incorporating pronunciation instruction into their teaching of listening.

However, while they acknowledged the benefits of incorporating pronunciation instruction in listening classes, and while almost all of them felt confident in their ability to teach pronunciation effectively, the actual implementation varied. Only a few teachers consistently included pronunciation instruction, while others did so occasionally or not at all. This notable disparity between the recognition of importance and the limited practice highlighted a significant gap in the incorporation of pronunciation instruction.

More importantly, when it came to teaching listening skills, each teacher had different priorities concerning the inclusion of elements of pronunciation. Some teachers prioritized suprasegmental features such as stress, intonation, and rhythm, while others also included segmental features like consonants and vowels. Only one teacher included all elements of pronunciation in her teaching of listening. Connected speech processes were included by most teachers, except for two. This variation indicates that there may not be a standardized approach to incorporating pronunciation instruction in listening classes, but overall, it is positive that most teachers include some aspects of pronunciation in their teaching. The research studies conducted by Kissling (2018), Phung et al. (2020), and Yenkimaleki et al. (2022) have all demonstrated that pronunciation instruction targeting both suprasegmental and segmental features leads to improvement of learners' pronunciation skills and understanding of the target language.

It is also worth noting that the majority of the teachers (five out of seven) strongly believed in the importance of teachers' awareness of English pronunciation rules. These teachers reckoned that having a solid understanding of pronunciation rules is crucial for effective pronunciation instruction. Their choice of the option 'to a very large extent' indicates a high level of importance placed on this aspect. The remaining two teachers chose the option 'to a large extent,' indicating that they also consider teachers' awareness

of English pronunciation rules to be important, although perhaps to a slightly lesser extent than the majority. Nonetheless, their choice signifies that they acknowledge the significance of this knowledge for effective pronunciation instruction. Contrary to Cauldwell's (2018) claim that pronunciation teaching in listening classes is rather neglected, the findings of this study seem to challenge this perspective. According to the participants, pronunciation instruction holds a significant role in enhancing listening skills and is generally emphasized in the classroom by many teachers.

As a matter of fact, most teachers said they take into account pronunciation problems when designing listening class materials, except for one teacher who did not consider them at all, and two teachers who only sometimes considered them. This supports Field's (2002, 2003, 2008, and 2019) argument that teachers should focus on diagnosing and addressing listening problems to improve student learning, as most teachers recognized the potential impact of pronunciation problems on comprehension and language proficiency when designing their listening class materials.

Regarding common words that are unrecognizable in the listening material that teachers teach, most of the participants (five out of seven), preferred to pronounce the word clearly and explain the modifications it has undergone. One teacher opted to pronounce the word again to make it recognizable, while another teacher selected the combination of both options. It is interesting to note that all the teachers agreed on the importance of not ignoring a common word when it is not recognizable.

Whatever strategy the teachers employed in dealing with unrecognizable common words, this demonstrates their awareness of the potential challenges their students may face in listening comprehension. This finding aligns with Field's (2003) identification of several challenges faced by ESL/EFL students related to word recognition, including attributing the wrong sense to a known word, failing to recognize phonetic variations of words, lacking understanding of spoken words, and struggling with segmenting words in connected speech. In fact, these challenges have also been highlighted by various researchers, including Brown, S. (2011), Goh & Wallace (2018), Hedge (2000), Mendelsohn (2006), Rost (2001), and Vandergrift & Goh (2012), in their discussions on the difficulties learners of English encounter in recognizing words.

As reported in the teachers' responses (Chapter Four, Section 4.5), most of them (five out of seven) believed that connected speech processes interfere with students' listening comprehension to a very large extent. The remaining two teachers pointed to interference but to a relatively large extent. Overall, the teachers agreed that connected speech processes have a noticeable impact on students' ability to understand spoken language.

Concerning teachers' knowledge of the rules related to connected speech processes, most of them (five teachers) stated that they are aware of all the rules governing connected speech processes. This implies that these teachers are familiar with various aspects of connected speech, such as assimilation, elision, and reduced forms of function words. Specifically, one teacher was acquainted only with the rules of assimilation and elision, and therefore had some understanding of connected speech processes. This teacher was aware of how specific sounds in words can change or merge together in connected speech. However, one teacher was familiar only with the rules governing reduced forms of function words. This teacher had knowledge of the alteration or omission of these words in connected speech, but was possibly lacking understanding of assimilation or other connected speech processes. Rosa's (2002) study rightly addressed teachers' knowledge and familiarity with connected speech processes, and highlighted that some teachers have a comprehensive understanding of these processes, while others have partial or limited knowledge in some particular processes. This was demonstrated in the present study.

Regarding the inclusion of connected speech processes in their teaching of listening, some teachers (three teachers) indicated that they regularly incorporate connected speech processes in their teaching of listening. Two teachers sometimes include connected speech processes in their classes, indicating that they may not always prioritize these aspects in their teaching. However, it is worth noting that two other teachers never include connected speech processes in their teaching of listening, as they felt that these processes are complex and require additional training in order to effectively incorporate them into their teaching.

The two teacher assistants, one with 3 years of teaching experience and the other with 4 years, who never included connected speech processes in their teaching of

listening, mentioned the complexity of the rules associated with connected speech processes and expressed a need for training in order to effectively teach them. Their views suggest that they may not feel confident or knowledgeable enough about the complexities of connected speech processes to incorporate them into their teaching. Probably, they believed that without a good understanding of these processes, they might be unable to teach them accurately or effectively to their students. Rosa's (2002) study on the island of Oahu, Hawaii, involving ESL instructors from institutions such as the Hawaii English Language Program, English Language Institute, and Brigham Young University Hawaii, similarly found that teachers with more training in reduced forms instruction were more likely to teach them explicitly. Conversely, those who did not receive any training found them complex to teach. Hence, her findings imply that lack of comprehensive training and knowledge of reduced forms and connected speech processes may hinder ESL instructors' professional competence.

The present study revealed a number of challenges that teachers of listening faced when including pronunciation instruction in general and connected speech processes in particular. These challenges can be summarized as follows: discrepancies between spelling and pronunciation, irregularities in stress and rhythm rules, modifications of sounds at word boundaries, difficulties in recognizing native speakers' speech and identifying words and spelling forms, limited vocabulary, and the need to develop students' strategies and enhance listening processes (both top-down and bottom-up). Finally, time limitations and lack of teaching materials and resources can also hinder effective pronunciation instruction. The present study's results are consistent with previous studies conducted in many places of the world, such as by Henrichsen (1984), Goh (2000), Gao (2014), Zahedi et al. (2007), Wong et al. (2017), Hamouda and Aljumah (2017), Sung et al. (2019), Joyce (2019), Bilianska (2019), Carney (2021), Momen Omar & Pilus (2022), and Zoghalmi (2023).

As mentioned in the previous chapter (Chapter Four, Section 4.5), teachers did not have a standardized or unified listening curriculum to rely on. Most teachers believed that the existing curriculum does not meet the requirements and interests of their students. This viewed lack of a common curriculum was further emphasized by one teacher who denied the existence of a listening curriculum altogether. With the exception of one teacher who

found the curriculum acceptable, all other respondents believed that the curriculum has weaknesses and does not meet the requirements and interests of their students. As a result, most teachers said that they did not utilize the official curriculum in their teaching of listening, and were bound to create their own syllabuses to better to their students' needs, interests, and language proficiency levels. This implies that there is a need for improvement and further development in the listening curriculum to better serve the students. The same problem was identified by Bouziri (2007) and emphasized the need for a new syllabus design that addresses the challenges faced in teaching listening skills to Tunisian students of English. To improve listening instruction, the author suggested creating a syllabus that considers the students' needs, current level, weaknesses, and intended use of their listening skills. Such syllabus should have clear goals for students to achieve and provide suitable materials that match their needs. It should also include clear explanations and real-life examples of various listening skills to enhance understanding and application.

Though some teachers' responses reflected dissatisfaction with the existing curriculum, they generally felt that they have the freedom to design their own syllabus and use their own materials to teach the listening module. In fact, not having a unified curriculum may also have some benefits and give autonomy to teachers. First, teachers have the freedom to choose their own materials, resources, and teaching approaches that they believe will be most effective for their students. This flexibility can facilitate a more dynamic and adaptable learning environment. Second, by designing their own syllabus, teachers can incorporate topics and materials that are relevant and interesting to their students, enhancing their engagement and motivation to learn. Third, designing their own syllabus allows teachers to tailor the curriculum to meet the specific needs, interests, and language proficiency levels of their students. This can lead to more effective and engaging learning experiences. Finally, designing their own syllabus requires teachers to continually reflect on their teaching practices, identify areas for improvement, and revise their syllabus accordingly. This is likely to promote their professional development and growth, and lead to learner autonomy.

Few teachers felt very satisfied with their teaching of listening skills; more felt only moderately satisfied. This indicates that teachers want to improve their teaching methods or approaches to enhance their overall satisfaction levels.

Teachers' views regarding the difficulty of teaching listening were quite diverse. Some teachers found it very 'difficult', often struggling with finding effective methods or resources for teaching this skill. Others perceived it as 'moderately difficult' or 'extremely difficult', indicating specific challenges in engaging students or assessing their progress in listening comprehension. But only one teacher perceived teaching listening as 'not difficult at all'. These views align with the findings of Field (2008, 2019), Mendelsohn (2006), and Vandergrift and Goh (2012). These researchers emphasized the perceptions that teachers may have when it comes to teaching listening, such as viewing it as a passive skill or lacking clear goals and objectives.

In the present study, teaching listening skills was viewed as challenging due to various factors. The first reason was the extensive amount of time and effort required to design and deliver effective listening lessons that are tailored to the needs and interests of students. This issue was also highlighted by Karimi & Nazari (2017), who found that Iranian teachers encountered similar obstacles, including time constraints, when attempting to integrate desired listening activities into their classroom teaching.

The second reason was the lack of suitable teaching materials which further complicates the teaching process. Similarly, Alrawashdeh and Al-zayed's (2017) study with Iranians students identified challenges in the educational environment, such as power cuts problems and a lack of resources. These challenges added to the difficulties teachers faced in teaching listening comprehension and highlighted the need of multimedia, such as such as audio recordings, video materials, and online platforms, for effective teaching.

The third reason that made teaching listening difficult and challenging was teaching heterogeneous groups, where students have various levels and needs within a single classroom setting. This diversity requires the teachers to adapt their instruction to accommodate a wide range of abilities, often resulting in difficulties in meeting all students' needs effectively. Consequently, it becomes challenging to ensure that each student is sufficiently engaged and progressing at an appropriate pace.

The last reason mentioned by the teachers is the nature of the English language, particularly its pronunciation, which can also hinder the development of listening skills. As Brown (2011) points out, there are various factors, including phonological changes, accents, speech rate, pauses and hesitations, prosody, genres or discourse structure, assimilation, elision, insertion, and weak forms, that can complicate listening comprehension for language learners. A view that is shared by Field (2008), Hedge (2000), Mendelsohn (2006), and Vandergrift & Goh (2012).

Teaching listening is therefore crucial as it is a fundamental skill upon which other language skills rely. To overcome these difficulties, teachers need to continually research the teaching of this skill, which can involve engaging in reflective practices or action research within the classroom to adapt their methods and meet the specific needs of their learners

As was reported in Chapter Four (Section 4.5), to satisfy their students, the teachers used a combination of different types of listening materials which contain normal real English and simplified and well articulated speech. This suggests that these teachers value a variety of listening materials and potentially adapt their teaching approaches based on the needs of their students. The teachers provided different justifications for their choice of materials in their listening lessons. Some emphasized the importance of using authentic materials to provide students with opportunities to acquire knowledge of the foreign language within a real communicative situation. Others highlighted the need for variety in teaching materials to avoid boredom and expose students to different types of English. In the same line, many researchers, including Vandergrift & Goh (2012), Tomlinson (2003), Mendelsohn (2006), advocated the use of both authentic and adapted materials to achieve a balance of exposure to natural speech and support for learners. They proposed that a combination of real-life materials and slightly adapted materials can aid language learners in listening by exposing them to natural speech while also providing the necessary support and structure to help them understand and overcome its challenges.

However, only one of the seven teachers exclusively used simplified and well-articulated speech, suggesting that this approach is more effective than using natural, complex speech, as it helps prevent student frustration and promotes classroom discussion and interaction. This view aligns with Brown's (2011) argument that classroom

(simplified) materials can still be valuable for teaching and learning purposes, even though they do not fully replicate authentic real-world situations.

The teachers were also requested to share their opinions on whether listening is emphasized and taught in classroom settings. It is worth recalling that three teachers strongly agreed that this skill is not given sufficient attention in classes. These teachers recognized that while listening skills are commonly evaluated in tests, they are not actively taught explicitly in class. This lack of emphasis on explicit instruction and practice in developing listening abilities highlights their awareness that training students to acquire effective listening strategies and techniques is presently inadequate. On the other hand, the teacher who disagreed with the statement believed that listening skills are actively taught in the classroom alongside testing. This viewpoint is supported by extensive literature on the subject, including studies by Abad (2023), Bouziri (2007), Brown (2011), Emerick (2018), Field (2008, 2019), Graham et al. (2014), Karimi & Nazari (2017), Madarbakus-Ring (2021), Mendelsohn (2006), Siegel (2014), Vandergrift (2008), and Vandergrift & Goh (2009). These researchers highlighted the need for a shift in teaching listening skills in ESL/EFL contexts, emphasizing the importance of moving beyond primarily testing listening abilities and instead focusing on instructing and improving them.

As for including perceptual activities in their listening classes, teachers' views varied. Out of the total number of teachers surveyed, three teachers indicated that they always include perceptual activities in their classes. This would imply that these teachers recognized the importance of engaging students in activities that help improve their perception and understanding of spoken language. On the other hand, two teachers incorporated perceptual activities in their lessons occasionally, but not consistently. This would suggest that they see some value in these activities, but may not prioritize them or have other teaching methods they prefer to use. Lastly, only two teachers do not include perceptual activities in their listening classes as they stated having alternative methods for teaching listening skills which do not incorporate perceptual activities.

Based on the teachers' responses, perceptual activities were used for various reasons and with different learning goals in mind. Some researchers used them because they consider them essential to their teaching goals, while others used them depending on the

specific learning objectives of the lesson. These activities were used to reinforce English pronunciation and spelling, assess comprehension of vocabulary and grammar, and support the gradual development of listening comprehension. This approach was viewed as beneficial for students of varying abilities, as it enhances their bottom-up skills. The teachers' use of perceptual activities aligns with the findings from various researchers, such as Brown (1990), Field (2003, 2019), Goh & Wallace (2018), Norris (1994, 1995), Richards (1983), Tsui & Fullilove (1998), Vandergrift (2008), and Vandergrift & Goh (2012), who support the use of perceptual activities. These activities help develop bottom-up skills, such as discriminating sounds and recognizing words and stress patterns, as well as identifying the impact of phonetic variations and reduced forms on segmentation and comprehension. Therefore, mastering the phonological code of English was considered fundamental by the participants, as it enhances students' understanding of sounds and phonological rules through perceptual activities.

Finally, as described in Chapter Four (Section 4.5), the last open-ended question of the questionnaire to teachers provided an opportunity for teachers to share any insights or opinions that they believed are significant but not addressed in the previous questions. The participants suggested that listening needs to be reconsidered because it is often tested rather than taught. They believed that students' proficiency in listening is more related to their personal ear training outside of the classroom. The teachers also emphasized the importance of setting clear goals when teaching listening and pronunciation, and avoiding overly focusing on a standardized version of the language to prevent frustrating students. Moreover, they highlighted the need for favorable conditions in the classroom, such as well-designed input, available materials, and extended time for teaching listening skills. Finally, they suggested that teachers should work together to create a standard curriculum or syllabus for teaching listening and speaking, and encourage continuous professional development.

5.1.5 Addressing Connected Speech Processes in First-Year Listening and Phonetics Syllabi

The last research question aims to explore the place and role of connected speech processes in the first-year listening and phonetics syllabi:

Research Question 5: How do the first-year listening and phonetics syllabi address connected speech processes?

As mentioned earlier in Chapter Four (Section 4.6), the analysis of the first-year listening and phonetics syllabi indicates that neither syllabus adequately addresses connected speech processes. As far as the listening syllabus is concerned, the content covers a broad range of topics related to general listening skills, such as expressing likes and dislikes, describing objects and people, and discussing past events. However, it lacks specific attention to connected speech processes. The syllabus does not outline any methodologies or activities designed to help students recognize or practice connected speech features like reductions, elisions, intrusions, or assimilations. This omission implies that students might not receive targeted instruction or practice in these crucial aspects of natural speech flow, which could limit their listening comprehension and perceptual accuracy.

As for the phonetics syllabus, while it provides foundational knowledge of phonetics, including articulation and prosody, it similarly falls short in addressing connected speech processes. The syllabus covers essential phonetic concepts but does not explicitly focus on the study or application of connected speech features. There are no specific methodologies or objectives related to connected speech processes, such as practical exercises or phonetic transcription activities aimed at understanding how speech sounds are modified in natural speech. The lack of attention to these processes may result in an incomplete understanding of how connected speech affects pronunciation and listening.

Overall, both syllabi would benefit from incorporating explicit content and methodologies related to connected speech processes to enhance students' overall listening and phonetic skills.

Based on the results obtained from the experimental study (pre and post test results), the responses to students' and teachers' questionnaire, and the analysis of the first-year listening and phonetics syllabi, several key points can be triangulated to provide a comprehensive understanding of the topic.

Firstly, the findings from the experiment suggest that training in connected speech processes leads to high improvement in students' perceptual accuracy and listening

comprehension. These results align with the students' questionnaire findings which highlights the benefits of exposure to real natural speech, use of suitable methods and materials, and the inclusion of pronunciation instruction. They also align with the teachers' recognition of the positive impact of connected speech processes on students' listening comprehension. However, the syllabi for the first-year listening and phonetics courses do not adequately address connected speech processes, missing a crucial element that enhances students' listening skills.

Secondly, the students' questionnaire findings highlight factors contributing to listening difficulties, such as unfamiliar topics and vocabulary, fast speech, connected speech, and a lack of exposure to natural speech. These factors are consistent with teachers' challenges in teaching listening, such as discrepancies between spelling and pronunciation and a lack of suitable teaching materials. Despite these identified challenges, the listening and phonetics syllabi fail to incorporate strategies to mitigate these issues. Specifically, the syllabi lack detailed methodologies, practical exercises, and assessment strategies focused on connected speech processes.

Lastly, the students' positive attitude towards including pronunciation instruction and training on connected speech processes indicates the effectiveness and benefits of such training. They report satisfaction with the training they received and express a desire for more instruction on specific aspects of connected speech. Teachers also support the inclusion of pronunciation instruction and recognize its importance, although the extent to which they incorporate it varies. Both students and teachers emphasize the need for continuous training and professional development. This perspective underscores the gap in the current syllabi, which do not provide sufficient guidance or resources to support the teaching and learning of connected speech processes.

In conclusion, the triangulation of the results as obtained from the experimental and control groups, the students' questionnaire, the teachers' questionnaire, and the listening and phonetics syllabi analysis suggests that incorporating connected speech processes into the curriculum is crucial for improving students' perceptual accuracy and listening comprehension. As noted earlier, exposure to real natural speech, the use of suitable methods and materials, and the inclusion of pronunciation instruction are three important factors that can contribute to improving listening skills. The current syllabi for the first-

year listening and phonetics courses do not adequately address these needs and require improvement. To bridge this gap, it is recommended to incorporate specific teaching methods, practical exercises, and assessment strategies focused on connected speech processes. Thus, further training is needed for both students and teachers to effectively incorporate these elements into their learning and teaching experiences. Continuous professional development and collaboration among teachers are also essential for enhancing teaching methods and curriculum of listening and speaking.

5.2 Limitations of the Study

Although this study has yielded significant findings, it contains some limitations, including the unavailability of teaching materials, the absence of classroom observation, and a small sample size among teacher participants.

Connected speech processes play a crucial role in natural language production and comprehension of L2, and it is important to have appropriate teaching materials to effectively address them in the intervention or in any everyday classes. With respect to this study, one of the limitations is the difficulty in finding suitable teaching materials on connected speech processes to conduct the experiment. Despite the researcher's extensive search, it was difficult to obtain appropriate teaching materials to investigate these processes. Therefore it was necessary to adapt existing materials to overcome this limitation. This implied that there was a need to design appropriate teaching materials which addressed all these processes. As mentioned earlier in this study, the scarcity of teaching materials on connected speech processes suggests that it is a neglected or less-studied area. This reflected a broader gap in the existing literature or educational resources, highlighting the need for further research and development in this domain. Without adequate teaching materials, it can be challenging to effectively teach and develop connected speech skills in students who need additional support in this area of knowledge.

The second limitation of the study is the absence of classroom observation. While the teachers accepted to participate in the study by responding to the questionnaire, they declined my request to be observed during their teaching sessions. As a result, there was a lack of direct observation and insights into how connected speech processes are actually

being taught in the listening instruction provided by the teachers in their classrooms. Direct observation could have shed more light on some specific techniques, strategies, and challenges encountered by both teachers and students when teaching and learning connected speech. Therefore, the absence of classroom observation in this study has prevented a more robust analysis of teachers' general teaching practices, including their approach to teaching listening and connected speech processes. It has also limited the ability to verify and check the self-reported information provided by the teachers in the questionnaire, and restricted the opportunity to corroborate the information obtained solely through the questionnaire. The reluctance of teachers to be observed in the classroom may largely stem from a mismatch between their beliefs about teaching listening skills and their actual practices, as highlighted by Graham et al. (2014) and Emerick (2018). Graham et al. (2014) found that teachers' understanding of effective listening instruction is compromised by a focus on task completion rather than skill development. Similarly, Emerick (2018) identified a gap between teachers' beliefs about explicit teaching and authentic materials and their actual classroom implementation. Thus, both studies call attention to the need for improved teacher training and support to better align teaching practices with effective strategies for developing students' listening skills, including the teaching of connected speech processes. Consequently, without classroom observation, the study lacks a comprehensive understanding of how teachers integrate connected speech processes into their teaching practices. This limits the depth of the study, as direct observation of classroom practices can provide valuable insights into their actual teaching practices.

The third limitation is the small sample size of the teacher participants. Since only seven out of ten questionnaires were completed and returned, the response rate was relatively low. A larger sample size is typically preferred for better representativeness and strength of conclusions, and to provide a more comprehensive perspective. On the other hand, while the teachers' questionnaire included both closed-ended and open-ended questions in this study, conducting an interview would have provided an opportunity for more in-depth interaction and follow-up questioning. However, this option was limited by certain factors such as research objectives and feasibility considerations, including time constraints, scheduling conflicts with participants, and access limitations. Nonetheless,

using a questionnaire enabled efficient gathering of responses from the participants and yielded valuable insights for the study.

5.3 Implications and Suggestions for Teaching

The present study has implications for teaching and pedagogy in general. Connected speech processes are common features of English pronunciation; however, these processes are often neglected in both general EFL teaching and specifically within the Algerian context of higher education. Considering the complexity of these features, and their role in developing students' perceptual accuracy and listening comprehension, it is recommended to introduce and teach them at an early stage of learning. On this point, Kelly (2000, p. 116) remarked: "it has been argued that one should teach "proper" forms before teaching assimilation, elisions and weak forms. However if pronunciation is to be properly integrated into language teaching, then it is best to start right at the beginning." It has been observed that the participants were not taught these processes until they reached university which is relatively late. Furthermore, the amount of time dedicated to teaching them was very limited. But things could be improved in the future regarding timing.

As a starting point, it is advisable to raise students' awareness about connected speech processes and convince them that utilizing such processes is not incorrect or careless speech, but rather an essential component for achieving the appropriate rhythm in English. If students are given the opportunity to practice these features, which in turn helps them recognize the significance of using them to enhance comprehensibility, it can effectively foster their interest and motivation in communication.

According to Avery and Ehrlich (1992), enhancing comprehensible speech in non-native students is the primary goal of training in the spoken language. Extensive work on connected speech processes will not only contribute to students' ability to produce fluent and comprehensible speech, but also ability to comprehend the spoken language. They wrote: "In attempting to increase your students' fluency and comprehensibility, it is essential that all of these aspects of connected speech be practised in the ESL classroom" (p. 89).

This suggests that to improve students' ability to speak smoothly and be easily understood by others, it is crucial to focus on and practice connected speech features such

as assimilation, elision, linking, and other aspects that are natural and essential to spoken language. By incorporating these elements into classroom activities, students can develop their proficiency in producing and understanding connected speech, leading to greater fluency and improved communication skills in English.

The following sub-sections are devoted to some strategies for teaching connected speech processes to EFL students:

- **Including connected speech instruction into EFL programmes**

The improvement of Algerian EFL students' perceptual accuracy of connected speech processes may be efficient if specific perceptual training were incorporated into language instruction programs. By focusing on assimilation, linking words, elision, and the reduced forms of function words, students would develop a better understanding and comprehension of natural spoken English. The findings of the study highlight the importance of targeting connected speech processes in listening comprehension instruction because students encounter difficulties in understanding fluent speech due to the presence of these processes. By explicitly teaching these processes in training, instructors can provide students with the tools to comprehend and decode connected speech effectively.

- **Raising phonological awareness and pronunciation improvement**

Connected speech processes are crucial for the development of phonological awareness in L2/ EFL students. By becoming familiar with the patterns of connected speech, students will be able to recognize and understand the common reductions and modifications used by native speakers. Developing this awareness will enhance their perceptual accuracy. Similarly, connected speech processes will directly impact pronunciation in EFL students. Understanding and incorporating connected speech features into pronunciation practice allow students to produce more native-like speech. By learning to link sounds, use weak forms, and apply assimilation correctly, students can enhance their pronunciation fluency and accuracy, making their speech more natural and intelligible; this will ultimately lead to improve their overall communication skills. It is worth mentioning that both students and teachers acknowledge the significance of

pronunciation instruction in enhancing listening and speaking skills. Hence, it is crucial for teachers to integrate pronunciation activities and exercises into their listening lessons to aid students in developing a deeper awareness of English pronunciation and enhancing their ability to comprehend the spoken language.

- **Providing exposure to real natural speech**

Understanding connected speech processes is essential for improving listening skills because they are frequent in natural, everyday speech. By being exposed to real natural speech, students have the opportunity to encounter and familiarize themselves with these processes. As a result, they become better equipped to understand native speakers and communicate more effectively in real-life English conversations. Therefore, teachers should include activities and materials that expose students to these connected speech processes, allowing them to practice and develop their listening skills in authentic contexts.

- **Addressing students' listening difficulties**

The study identifies various factors contributing to students' listening difficulties, such as unfamiliar topics and vocabulary, fast speech, and connected speech. Teachers should be aware of these challenges and design activities and tasks that help students overcome them, such as providing vocabulary support and focusing on techniques for comprehending fast and connected speech.

- **Meeting the needs and preferences of each student**

The results of this study indicate that students have different preferences for listening materials and approaches. This is because students have different learning styles, abilities, and interests, leading to varied preferences for instructional materials and approaches. Some students may prefer authentic materials, such as real-life recordings, podcasts, or news events, as these offer a more natural and diverse range of language use. On the other hand, other students might benefit from simplified materials, like graded readers or language learning textbooks, which provide controlled exposure to language. To accommodate the varying preferences and needs of students, teachers are advised to adopt

a balanced approach. This involves incorporating a mix of authentic and simplified materials in their teaching strategies. By doing so, teachers ensure that students experience a variety of listening materials and a range of linguistic levels to meet their individual requirements.

- **Strengthening teachers of listening with pronunciation knowledge**

It is essential for teachers of listening to have knowledge about English pronunciation features. Pronunciation plays a crucial role in communication and understanding spoken English. Thus, teachers should be equipped with the necessary knowledge and skills to teach students accurate pronunciation. Having knowledge about English pronunciation features allows teachers to effectively identify and address common pronunciation challenges faced by students. It also enables them to provide targeted instruction and facilitate the development of listening skills. Without this knowledge, teachers may struggle to help students with specific pronunciation difficulties and may not be able to create a supportive learning environment. Additionally, understanding English pronunciation features enables teachers to model correct pronunciation and provide accurate feedback to learners. This greatly enhances students' ability to comprehend spoken English and communicate effectively with native speakers. In summary, teachers of listening should possess knowledge about English pronunciation features to support effective language acquisition and help learners overcome pronunciation challenges. Although this is basic knowledge for university teachers with a degree in English, which typically includes courses on English pronunciation, teaching pronunciation in class is neither easy nor evident. In general, teachers need more training in this aspect of language to address students' difficulties effectively and provide appropriate remedies.

- **Collaboration between the teaching of phonetics and listening**

Collaboration and communication between instructors teaching phonetics and listening modules are crucial for enhancing the learning experience of students. The main goal of this collaboration should be to bridge the gap between these two modules, ensuring a cohesive and integrated approach. By integrating targeted phonetics instruction within listening courses, instructors can introduce key phonetic concepts, teach pronunciation of connected speech processes, and provide related practice activities. This

integration will help students develop a strong foundation in phonetics and improve their ability to perceive English pronunciation features. Therefore, the potential benefits of collaboration between the teaching of phonetics and listening modules are highly valued, leading to a more effective and integrated learning experience for students.

- **Providing professional development**

This implies offering EFL teachers additional training and chances to work together. This study shows that teachers want more training on how to teach connected speech and how to help students with listening difficulties. Teachers would appreciate to have ongoing professional development sessions that focus on teaching strategies for listening. Additionally, teachers should be encouraged to collaborate with each other to share their best practices and improve their teaching methods and curriculum for listening.

- **Using suitable methods and materials**

To address students' listening difficulties in relation to connected speech processes, it is necessary to use or develop suitable methods and materials. By providing explicit instruction, ample practice opportunities, and authentic materials, students can develop their ability to understand and produce connected speech effectively. Teachers should choose or design materials that are appropriate for their students' proficiency level and provide opportunities for practice and comprehension in listening activities.

In conclusion, effectively teaching connected speech processes to EFL students requires integrating these aspects into language instruction, raising phonological awareness, and providing exposure to natural speech. Addressing listening difficulties, meeting diverse student needs, and equipping teachers with pronunciation knowledge are essential. Additionally, collaboration between phonetics and listening instructors, ongoing professional development, and the use of suitable methods and materials are crucial for enhancing students' comprehension and pronunciation skills, ultimately improving their overall communication abilities in English.

Conclusion

This chapter has provided a discussion and interpretation of the research finding. By carefully analyzing the main findings from each instrument separately, comparing pretest and posttest responses, thoroughly examining both students' and teachers' questionnaires, and analyzing the document analysis of the first-year listening and phonetics syllabi, valuable insights have been gained regarding potential relationships within the research data. The triangulation of these findings indicates that teaching students about connected speech processes can help improve their ability to accurately understand and comprehend spoken language. The limitations of the study have also been underscored. Finally, some implications and further recommendations for teachers have been highlighted in the last section of the chapter. It seems therefore essential to expose students to authentic, natural speech, utilize appropriate techniques and materials, and include pronunciation instruction in order to enhance listening skills. Furthermore, additional training is necessary for both students and teachers to effectively integrate these aspects into their learning and teaching practices. Continuous professional development and collaboration among teachers are also critical for improving teaching methods and curriculum for listening and speaking. Moreover, the study underscores the need for curriculum designers to incorporate connected speech training early in language instruction, which could significantly boost students' confidence and competence in real-life communication scenarios and enhance students' perceptual accuracy and listening comprehension of spoken English.

General Conclusion

General Conclusion

The present study deals with the issue of enhancing first-year English students' perceptual accuracy and listening comprehension through explicit instruction in connected speech processes. Natural spoken English often undergoes modifications due to native speakers' tendency to simplify their speech for better communication. This phenomenon has been observed as an obstacle and a challenge for EFL students who may not be familiar with the modifications that occur at word boundaries, such as assimilation, linking, elision, and the reduced forms of function words. Students often struggle to recognize familiar words when spoken in connected speech and the modifications that occur in connected speech can make it difficult for students to accurately segment and identify individual words. Without the ability to segment speech into individual words, it becomes more difficult for EFL students to decode and comprehend the spoken language accurately.

The aim of this study was to understand how EFL students perceive connected speech processes as used by native speakers in their natural speech. It also aimed to explore how teachers address these processes to help students interpret and communicate in English more effectively. Explicit instruction in connected speech processes was viewed as a potential way to help students overcome the difficulties posed by natural spoken language and enhance their overall listening comprehension.

Therefore, examining the impact of perceptual training in connected speech processes and the attitudes towards connected speech teaching among Algerian EFL students and teachers at ENSB were the two main goals of this study. Because little is known regarding the ability of Algerian EFL students to decode, perceive, and understand connected speech characterized by some features such as assimilation, linking, elision, and the reduced forms of function words, it was considered important to conduct an experiment. This experiment aimed to determine the effectiveness of teaching these processes on students' perceptual accuracy and listening comprehension and gather data from both students and teachers on connected speech processes.

For the student participants, a questionnaire was administered to the experimental group to gather direct feedback on their experiences with the instructional intervention.. As for the teacher participants, a questionnaire was administered to them to capture their professional perspectives and experiences regarding connected speech processes and their teaching of listening skills. Additionally, a document analysis of the first-year listening and phonetics syllabi was conducted to evaluate how these syllabi address connected speech processes and assess their role in enhancing students' comprehension of natural spoken English. It was essential to acquire insights from these different perspectives to gain a comprehensive understanding of the topic.

To this aim, five primary research questions were explored. The first question investigated whether a perceptual training in connected speech processes leads to an improvement in the perceptual accuracy of these processes among Algerian EFL students at ENSB. The second question examined whether a perceptual training in connected speech processes, specifically focusing on assimilation, elision, reduced forms of function words, and linking, enhanced Algerian EFL students' listening comprehension. The third question explored the attitudes of Algerian EFL students towards the explicit training on connected speech processes in relation to listening skills. The fourth question sought to understand the attitudes of Algerian EFL teachers towards listening skills in general and connected speech teaching specifically. Finally, the fifth question aimed to determine the extent to which the first-year listening and phonetics syllabi at ENSB address connected speech processes and whether these syllabuses sufficiently cover these aspects of pronunciation, which are crucial for improving students' comprehension of natural spoken English.

To address the aforementioned questions, a quasi-experimental design was implemented involving two groups: a control group and an experimental group. Each group consisted of fifty-four first-year students enrolled at the Teacher Training College Bouzareah (ENSB). The study utilized pre- and post-tests, questionnaires, as well as document analysis of listening and speaking syllabi, as data collection instruments. Initially, a pre-experiment questionnaire was administered to establish comparable baseline characteristics between the control and experimental groups. Subsequently, the pretest was conducted followed by approximately six months of connected speech

processes instruction. The pretest involved a series of listening tasks that focused on the perception of connected speech processes and listening comprehension. The same listening tasks were also used in the posttest to measure any changes or improvements after the intervention. At the end of the experiment, a post-experiment questionnaire was administered to the experimental group to examine the participants' attitudes and reaction to the training. Similarly, a questionnaire was administered to teachers of listening to find out about their attitudes, opinions, and experiences regarding teaching listening in general and teaching connected speech processes specifically.

Concerning the results of the experiment, the effectiveness of teaching connected speech processes in improving perceptual accuracy and listening comprehension of students was established. Thus, after addressing and discussing the sub-questions pertaining to assimilation, linking, elision, and the reduced forms of function words, it was concluded that providing perceptual training in connected speech processes indeed enhances the perceptual accuracy of Algerian EFL students at ENSB. Consequently, the null hypothesis, which suggested no improvement and was stated in the General Introduction, was rejected in favor of the alternative hypothesis, indicating that training does bring about improvement.

Moreover, incorporating training on connected speech processes not only enhanced students' listening comprehension but also aided in their ability to understand spoken language more effectively. As a result, the null hypothesis, which claimed that there is no improvement in students' listening comprehension through perceptual training in connected speech processes, was rejected. In contrast, the alternative hypothesis, which suggests that training does lead to improvement, was accepted.

In summary, teaching connected speech processes has helped students to improve their perception and understanding of spoken language more effectively. This study has important implications for language learners, as it emphasizes the advantages of this type of instruction in enhancing listening abilities.

Concerning the results of the students' questionnaire, they showed that many students found listening difficult; and the factors contributing to this difficulty include unfamiliar topics and vocabulary, fast speech, connected speech, lack of exposure to

natural speech, and differences between spoken and written language. The study has highlighted the importance of exposure to real natural speech, the use of methods and materials that take into account the individual students' strengths, weaknesses, and learning style to create a personalized approach to improving listening skills, and the inclusion of pronunciation instruction in improving listening skills.

In terms of identifying every word while listening, many of them considered it slightly important, while most of them found it important. A smaller proportion of students viewed it as very or extremely important. They used a contextual approach to deal with missing words, relying on the surrounding context to comprehend the overall message. Regarding listening materials, some of them valued exposure to authentic language, while others preferred simplified material.

Regarding the inclusion of pronunciation instruction in listening lessons, most students had a positive view, recognizing its importance in improving their listening and speaking abilities. They believed that pronunciation instruction increases their awareness of how words are pronounced, and helps them recognize and understand words more easily. Training on connected speech processes was found to be motivating and beneficial, enhancing students' ability to understand spoken English, improving their speaking skills, and helping them focus on important information. Most students were satisfied with the training, although some wished more specific aspects to be covered. Overall, the connected speech training was seen as effective and beneficial, although some students feel that the duration of the training was not sufficient.

Concerning the results of the teachers' questionnaire, the participants believe that teaching pronunciation is important in listening classes because it improves comprehension, speaking skills, and self-confidence. However, teachers differed in how much they prioritize pronunciation instruction and which elements of pronunciation they focus on. They recognized the impact of connected speech on listening comprehension but did not consistently include it in their teaching often owing to lack of training. They felt that more training was needed to effectively incorporate these processes into their lessons.

Additionally, teachers had diverse opinions on the difficulty of teaching listening, with some finding it extremely difficult and others finding it manageable. They faced

challenges in teaching listening, such as discrepancy between spelling and pronunciation and a lack of suitable materials. They were dissatisfied with the existing listening curriculum and said they created their own syllabuses to meet their students' needs, allowing them to choose effective materials and teaching approaches. However, the lack of a unified curriculum created challenges. Teachers valued a variety of listening materials and believed that listening skills are not sufficiently emphasized in educational settings. They also differed in their use of perceptual activities in their teaching, with some prioritizing them and others not using them at all. In general, teachers stressed the need for ongoing professional development and collaboration to enhance teaching methods and curriculum for listening and speaking.

Based on the results of the analysis of the data obtained from the experimental study, the students' questionnaire and the teachers' questionnaire, it was concluded that training in connected speech processes can lead to improvements in students' ability to accurately perceive and comprehend spoken language. This conclusion was supported by the students' questionnaire findings, which emphasized the benefits of exposure to authentic speech, appropriate methods and materials, and pronunciation instruction. It also aligned with the teachers' recognition of the impact of connected speech processes on listening comprehension.

Moreover, the students' questionnaire findings highlighted the factors that contributed to difficulties in listening, such as unfamiliar topics and vocabulary, fast and connected speech, and lack of exposure to natural speech. These factors are consistent with the challenges faced by teachers in teaching listening, such as the difference between spelling and pronunciation and a lack of suitable materials. Both sets of findings stress the importance of addressing these difficulties and challenges through training and professional development.

The students' positive attitude towards pronunciation instruction, their satisfaction with training on connected speech processes, and their desire for more specific training indicated the effectiveness and advantages of such training. This was reinforced by the teachers' belief in the importance of pronunciation instruction, although its implementation varied from teacher to teacher. Their emphasis on professional

development and collaboration also highlighted the need for ongoing training in teaching methods related to listening and speaking.

Finally, the findings from document analysis of the first-year listening and phonetics syllabi revealed that there is a significant gap in the explicit instruction of connected speech processes. The listening syllabus covers a broad range of topics related to general listening skills but lacks specific attention to connected speech features. This absence suggests that students may not receive targeted instruction or practice in recognizing these crucial aspects of natural speech flow. Similarly, the phonetics syllabus provides foundational knowledge but does not focus on connected speech processes, potentially limiting students' understanding of how speech sounds interact in connected speech. This gap suggests that there is a need for more comprehensive integration of these processes into the syllabi to better prepare students for the challenges of understanding real-world spoken English. By aligning the syllabi more closely with the needs of students, particularly in terms of exposure to and practice with connected speech, teachers can enhance the overall effectiveness of the listening and phonetics courses, ensuring that students are better equipped to handle the complexities of spoken English.

In conclusion, this study demonstrates that teaching connected speech processes plays a crucial role in improving students' perception and understanding of spoken language. The findings from both the students' and teachers' questionnaires highlight the importance of exposure to authentic speech, the use of appropriate methods and materials, and the inclusion of pronunciation instruction as key factors in enhancing listening skills. However, the study also reveals that further training is necessary for both students and teachers to effectively incorporate these elements into their learning and teaching experiences. Continuous professional development and collaboration among teachers are essential for improving teaching methods and curriculum design for listening and speaking skills, ensuring that all students have the opportunity to develop the competence and confidence they need to succeed in their English language studies.

To conclude this study, it seems relevant to provide some directions for future research such as exploring or investigating additional aspects that have not been addressed in this study.

There is a need for more comprehensive resources and educational tools on connected speech processes to support effective teaching, enhance listening skills, and improve oral communication. This necessitates the development of established guidelines, teaching materials, and instructional approaches that can be widely followed and implemented by educators. Collaboration among researchers, professionals, and educational institutions is essential for designing and developing teaching resources that cater to the specific needs related to connected speech processes.

This study focuses solely on the impact of connected speech processes instruction on students' perception and listening comprehension but not production. It would be beneficial to investigate if the instruction on connected speech processes has any impact on students' ability to produce connected speech themselves. Additionally, exploring the potential benefits that improved connected speech perception may have on students' oral communication skills would provide valuable insights.

A comparison between different perceptual training methods, approaches or interventions on connected speech perception would also be helpful. This may include comparing traditional auditory-only training with other approaches that incorporate visual cues, such as videos; or comparing explicit instruction with implicit instruction, or the combination of both. For example, one group of students may receive explicit instruction, where the rules and strategies of connected speech are explicitly taught, while another group may receive implicit instruction, where connected speech is integrated naturally into the language input without explicit focus. By comparing the outcomes of these different instructional methods, researchers can identify which approach is more effective in enhancing students' perception and production of connected speech.

Further research may also examine the long-term effects of connected speech perceptual training on students' listening skills. This may involve follow-up assessments conducted weeks or months after the training to determine if the initial findings hold over an extended period. Therefore, it seems worth investigating whether the perceptual training on connected speech perception has a lasting impact on participants' ability to comprehend and process connected speech in everyday settings.

According to ENSB curriculum, connected speech processes are taught in the third year phonetics course. It would be interesting to examine whether the timing of teaching connected speech processes has any influence on third year students' perception and understanding of spoken English and to compare students who have prior exposure to connected speech processes with those who are introduced to it for the first time (in this case third year students) assessing potential differences in their learning outcomes.

Finally, to overcome the limitation of the absence of classroom observations in this study, a future research project may focus on observing teachers' listening classes. One could understand the reasons behind teachers' reluctance to be observed, and to investigate the underlying factors that led to the teachers' refusal to participate in classroom observations. Understanding their concerns or reservations may shed light on any potential barriers or challenges faced by teachers when it comes to incorporating new teaching techniques or allowing external observation. This may raise important issues of teacher education and professional development, and may lead to re-think the English degree curriculum in its integrity.

The present study has contributed to research in three ways by addressing a gap, demonstrating practical impacts on language learning, research method and teaching perspectives, and offering practical tasks on connected speech processes**.**

This study has addressed an area that had not been extensively studied although perceptual training in connected speech processes on first year perceptual accuracy and listening comprehension was indeed worth investigating.

It has demonstrated that training students' perception can improve their accuracy and listening comprehension. This is important for language teachers and curriculum designers because it provides evidence that these training methods can effectively improve students' listening skills.

From a methodological perspective, the study involved a quasi-experimental design and questionnaires to gather quantitative and qualitative data from both students and teachers. This approach has helped enhance the current research methods in the field of connected speech and listening comprehension. By considering different viewpoints and

gathering valuable insights, the study has offered a comprehensive approach to understanding the topic.

From pedagogical and professional perspectives, this study has provided valuable information for teachers and educators. By exploring how students reacted to the training and by gathering their opinions, as well as understanding teachers' perspectives on connected speech and listening comprehension, this research has offered pedagogical insights. These insights can help instructors create effective training programs that improve students' ability to understand connected speech processes. It has also provided a deeper understanding of the difficulties and preferences related to connected speech when it comes to listening comprehension.

In addition, the tasks suggested in the treatment section can be considered a valuable contribution to research. These tasks provide practical recommendations for educators to incorporate connected speech into their teaching methods, bridging the gap between theory and practice. By offering specific strategies and guidelines, this study can help educators enhance their teaching and students' learning and thereby improve knowledge and use of connected speech processes of English.

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Appendices

Appendices

Appendix A

Pre-test Questionnaire to Students

Dear Students,

The purpose of this questionnaire is to obtain your opinions about your listening and pronunciation experiences of the English language. You are kindly required either to circle the answer that corresponds to you or to provide full answer when necessary. Please answer these questions as clearly as possible. All information will remain anonymous.

Section one: Background Information

1-Gender: Male ☐ Female ☐

2-Age: ……

3-How long have you been learning English?

……...

4-Do you have any hearing problem?

Yes ☐ No ☐

5-Have you ever lived in an English speaking country?

……...

Section two: Language Information

6-Do you listen to English outside the classroom?

Yes ☐ No ☐

7-If yes, which of the following materials do you listen to?

a-Radio programmes
b-Movies
c-On line videos
d-Other, please specify.....
……....

8-How often do you listen to these materials?

a-Always
b-Ofen
c-Sometimes
d-Rarely
e-Never

9-Do you think that listening to spoken English is:

a-Very difficult
b-Difficult
c-Neither difficult nor easy
d-Easy
e-Very easy

10-When listening to spoken English, which of the following difficulties do you encounter? (Please circle all the elements that correspond to you).

a-Unfamiliar topics
b-New vocabulary
c-Pronunciation
d-Speed of delivery
e-Other, specify .....……..…
…….....

11-What are the elements of pronunciation you studied before coming to ENSB? (Circle all the elements you studied)

a-Consonants
b-Vowels
c-Word stress
d-Sentence Stress
e-Intonation
f-Modification of sounds at word boundaries.

12-If you circle modification of sounds at word boundaries, which of the following aspects did you study?

a-Assimilation of sounds
b-Linking of sounds
c-Deletion of sounds
d-Reduction of function words

Thank you for your Cooperation.

Appendix B

Perceptual Activities

Answer Sheet

Exercise one:

Part One: Assimilation (Sound identification)

Listen to these sentences and notice the consonant sounds in the underlined words.

a-Circle the consonant sounds that change.

b-Give the phonetic symbols for these consonants.	**Responses**
1-It has some goo**d p**oints.	(/d/ becomes /b/)
2-It's i**n B**ritain's interest to become more involved with Europe.	(/n/ becomes /m/)
3-He spent three years in an ope**n p**rison.	(/n/ becomes /m/)
4-We don't have much commo**n g**round.	(/n/ becomes /ŋ/)
5-the goo**d g**uys.	(/d/ becomes /g/)
6-the virus ca**n c**arry in a protein	(/n/ becomes /ŋ/)
7-coul**d b**e good at this.	(/d/ becomes /b/)
8-we wan**t m**ore.	(/nt/ becomes /mp/)
9-I ca**n't b**ear to watch it.	(/nt/ becomes /mp/)
10-Ca**n b**e more than the sum of their parts.	(/n/ becomes /m/)

Part Two: Assimilation (Word identification)

In this task, you will have to fill in the gaps in the sentences by writing what you hear from the recording. If you are not sure of the words, write your best guess. (You are required to find out 20 items) **Responses**

1-Be careful-that's .....! (wet paint)

2-I expect there'll be a delay ..... (as usual)

3-..... win? (did Brazil)

4-I thought you'd ..... (gone back)

5-They ..... yet. (haven't paid)

6-We've got to..... six. (start by)

7-You'll see a ..... on your left. (white gate)

8-The ..... need cleaning. (seat covers)

9-..... always said it would be easy. (but you)

10-What was the meal we .....? (had yesterday)

Exercise two: Linking (Gap filling)

In this task, you will have to fill in the gaps in the sentences by writing what you hear from the recording. (There are 40 items)

S**tudents are required to recognize the words that are in bold and write them in the gaps bearing numbers.**

1-**My** (1) **old** (2) **uncle**(3)**'s** (4) coming to stay **with**(5) **us**(6) **for**(7) Easter.

2-I (8) **often**(9) **eat** (10) **an**(11) **egg**(12) **with**(13) **a**(14) handful **of**(15) **olives**(16) **in**(17) the evening.

3-They **wrote**(18) **to**(19) **us**(20) but **left**(21) **out**(22) their **new**(23) **address**(24).

4-I always **like**(25) **a**(26) **bite**(27) **to**(28) **eat**(29) before I go to bed.

5-You **might**(30) **earn**(31) more.

6-I **called**(32) **out**(33) **the**(34) answer.

7-**They'**(35) **re**(36) **under**(37) the desk.

8-Could you **grab**(38) **both**(39) **of**(40) them?

Exercise three: Elision (Dictation)

In this task, you will have to write the sentences you hear from the recording. (There are 10 sentences)

Listen to the recording and write down the sentences you hear on the worksheet.

1-..... (The **first girl** earned twenty pounds)

2-..... (When we **reached Paris**, we stopped for lunch)

3-..... (She **acts like** she owns the place)

4-..... (George the **sixth's throne**)

5-..... (**Hold tight**)

6- ..... (They **kept quiet**)

7-..... (I **slept badly**)

8-..... (Can you **lend m**e a quid?)

9-..... (We had a **cold lunch** in a small bar)

10-..... (I **just can't** recall his name)

Exercise four: Function words (Cloze dictation)

In this task, you will have to fill in the gaps in the sentences by writing what you hear from the recording. (There are 26 items)**.**

S**tudents are required to recognize the words that are in bold.**

1- I can lend you £20, **and** (1) that**'s** (2) all.

2-What **shall** (3) **we** (4) do tonight?

3-Do you want **some** (5) more coffee?

4-I told **him**(6) **he** (7) **can** (8) stay **as** (9) long **as** he likes.

5-I can't remember if **I'm** (10) meeting **her** (11) **at** (12) quarter to or quarter past.

6-Put **your** (13) coat on.

7-I think we **should** (14) **have** (15) gone the other way.

8-You (16) **must** (17) close this door

9-He **was** (18) **on** (19) **his** (20) way **to** (21) work.

10-Where **do** (22) you go to school?

11-We**'re** (23) thinking **of** (24) moving house.

12-I'd told **them** (25) before.

13-I wouldn't bother if I **were** (26) you.

Appendix C

Listening comprehension Activities
Answer Sheet

Conversation 1

Exercise one: Listen to the conversation and answer these questions.

1-Why does Steven, a radio presenter, ask questions?

.....
.....

2-When was the recording made?

.....
.....

3-Where does Steven say people talk about the weather?

.....
.....

4-Who does Mel talk to about the weather?

.....
.....

5-What did Steven used to wear when he was young, even when it was cold?

.....
.....

6-How long did Mel stay in the Highlands of Scotland?

.....
.....

Exercise two: Listen to the conversation again. Who says what? Write S (Steven), M (Mel) or B (both) next to each idea.

7-The weather's getting better. .....

8-The clocks are going to change. .....

9-I've learnt something new. .....

10-Three months is a long time. .....

11-Glasgow has extreme weather. .....

12-The weather made me ill. .....

Conversation 2

Exercise three: Listen to the conversation and answer these questions.

13-What extra information do you hear about rice and mushrooms?

.....

14-What should you do with the vegetable stock?

.....

15-Which ingredient can you leave out?

.....

16-Which ingredient is used to decorate the finished meal?

.....

Exercise four: Ian uses lots of pronouns so he doesn't have to say the same word again. Look at these phrases from the ingredients and instructions. In each one, what does the word in bold refer to?

17-..... **they** certainly add a real depth to the flavour.

18-....., then let **that** warm through.

19-....., let **them** go transparent.

20-..... take **it** off the heat.

Exercise five: Listen again and answer these questions.

21-Which ingredients do you chop and fry in the oil before you add the rice?

.....

22-When do you add the dried mushrooms?

.....

23-How long do you cook the rice for?

.....

24-What can you add at the end to make the risotto taste richer?

.....

Conversation 3

Exercise six: Listen to the first part of the interview and add one more piece of information to each of the sentences below.

25-John is in Vancouver at the moment.

.....

.....

26-John texted his mum before the opening ceremony.

.....

.....

27-Julie cried.

.....

.....

28-Julie thought John was going to have an accident.

.....

.....

29-John had an accident.

.....

.....

Exercise seven: Listen to the next part of the interview and decide if these statements are true (T) or false (F). Correct any false ones.

30-John watched a film called Cool Runnings on the plane to Vancouver.

.....

31-John likes to puts his hand on his knee before he starts a race.

.....

32-John checks a lot of things before he drives his car.

.....

Exercise eight: Listen again and answer these questions.

33-What does Julie think about John watch Cool Runnings on the plane?

.....

34-Does Julie think John is superstitious?

.....

35-What does Julie mean when she says, 'He'll tell me off for this'?

.....

36-How does the interviewer react when Julie tells her about the things John does before he drives his car?

.....

Exercise nine: Listen again and complete these sentences.

37-John hopes to finish in the top ten or .....

38-Julie thinks that the top ..... skiers have a lot of pressure to perform well.

39-John likes to be .....

40-Julie says that John will give .....

Appendix D

Listening Scripts

Conversation one

Steven: If talking about the weather was an Olympic sport, then you could guarantee that Britain would top the medal tables this year at London 2012. Is there anything more British than having a right good moan about the weather? Even when you go abroad, what do you do? You check the weather back home, just to make sure you're getting your money as worth as you bask in the sunshine. But, far from being weird British quirk, talking about the rain or shine can be pretty positive. Is there any better way to start a conversation with a stranger? I'm now joined by comedienne Mel Giedroyc. Hi Mel!

Mel: Hello, Steven. How are you?

Steven: I'm great. How are you?

Mel: I'm good. I'm good. I'm particularly pleased because the weather's looking up.

Steven: Ahhh! It is at the moment. At the moment.

Mel: It's looking up. What are we? End of March and, er, it's warm, the blossom's out, and, er, well, of course. British summer time starts officially, the old clocks going forwards so I think, I think it's looking positive.

Steven: Now, do you think being British and talking about the weather are just inseparable?

Mel: I have to say I think because our weather is so mad [Mmm] and so changeable, I think it does obsess us as a nation, actually. Did you know, for example, Steven, that we Brits spend an average of three months over the course of our lifetimes, talking about the weather?

Steven: I did not know that, but I can believe that.

Mel: Three months! That's a long time, isn't it?

Steven: That is a long time, actually. But it is a great way to talk to people, though, isn't it? Er, in a taxi, in a shop. It's the first thing that you talk about.

Mel: Yes. I find the older I get, as well, um, it obsesses me more and more. I have a daily chat with my mum about the weather, but that I really enjoy—it's not something that I regard, you know, as, as a chore. I actually love it because it's always changing. You never know what you're going to get.

Steven: Yeah, that's something I can definitely relate to. I remember being younger, not having a care in the world about the weather, just going about in a T-shirt and th-this is in Glasgow.

Mel: Now that's bold.

Steven: That is bold.

Mel: You've got some fairly extreme weather up there, haven't you?

Steven: We do, actually. I mean, in the last few years, we've had extreme weather all over the UK, really. We're had, um, some incredible winters, many tornados, and even recently, we're had, um, some of the driest winters on record as well.

Mel: Yeah. I have to say Scotland is the only place I've ever had sunstroke.

Steven: Really?

Mel: Yes. It was in the Highlands of Scotland, up near Ardgye, and, er, we were up there for a week, and the sun came out, didn't think anything of it. Two days later, terrible sunstroke, in bed, couldn't even eat, Steven, and for me, I'm telling you, there's got to be something wrong if I can't eat.

Steven: Me too, I'm exactly the same.

Mel: Yeah.

Conversation two

Track 1

Presenter: All right. Well, what have we got today, then?

Ian: Er, today, I thought, um. I'd do a mushroom risotto.

Presenter: All right, so we've got mushroom risotto. Wh-, what do we need for this? Obviously mushrooms.

Ian: Er, indeed, yes, um, right, this is probably enough for two people. Er, the important thing to choose is the right rice. Um, the rice is, is a wild grass seed, and there's thousands of varieties. But the two most commonly used for risotto are, are Arborio or carnaroli. Um, both are widely available in, um most supermarkets, and if you wanna go to an Italian deli, you'll find that, er, you'll be able to get hold of some, certainly carnaroli will be available. Um, you'll need about 50 to 60 grams or two to three ounces per person. Um, I'd also invest in some dried mixed mushrooms, again available in any supermarket. Um, and they add, er, an added di-, they certainly add a real depth to the flavor, Then I'd get about 300 grams or six ounces of your mushrooms of your choice. There's, now,

thankfully, er, there's a wide variety of mushrooms now available in most supermarkets. Jus-, get about as much as you can, different types, throw them all together. You need a glass of dry white wine [Mm!] or two, er, one for you, one for the risotto, um, a small onion, er as much garlic as you like, about 300 mls or half a pint of vegetable stock, um, and that should be warmed, um, and in a saucepan next to the pan that you're going to make the risotto in. Er, a couple of tablespoons of olive oil, and optional, parmesan to top off with. And then parsley to garnish with.

Track 2

Presenter: Well, OK, well, shall we, er, shall we start, er, going through the method?

Ian: The method. Er, the first thing you do is to chop up the mushrooms, chop up the onions, chop up the garlic, then put the oil in a large frying pan, then let that warm through to, on a medium heat, add in the onions, let them go transparent, for about three or four minutes that'll take. Um, after that, throw in the garlic, let that go for a minute or two, throw the mushrooms in, um, fry them in the oil for about two or three minutes, and if it sounds like it's dry, um, add some more oil if necessary. Um, give them about five minutes then put in th-, the rice. Um, then throw in the wine. And once you can hear th-, the wine having boiled down slightly, then put in the chopped, dried mushrooms, then add some stock and then slowly keep adding stock, allowing the rice to absorb the, er, the liquor for about 20 minutes or so. After 20 minutes, try and fish one or two grains of the rice and test them. You want them so they've gone and absorbed, but become quite soft. Um, you can go for about 25 minutes, but no more that because then th-, the rice starts breaking down and it just looks like a dog's dinner. It tastes horrible.

Presenter: It's such a fine line!

Ian: Well, it's not, it is and it isn't, you can murder a risotto. In fact, I had one on New Year's Eve, um I was so appalled with it, I, I had to send it back, it was dreadful.

Presenter: What, in a restaurant?

Ian: Yes, in a restaurant. As I say, once you're happy the rice is cooked through, then turn it, take it off the heat basically and serve. Um, now it you wanted to, you can either scrape some parmesan on top of that and work it through. If you want to 'enrichen' it, I would

add a knob of butter, at the very end of the cooking, and then put it on the plate and then just go on as you would w-, with fresh parsley, and then serve.

Conversation Three

Track 1

Presenter: Julie has arrived. Hello, Julie. [Hi] Hello, how are you doing today?

Julie: Fine, thank you.

Presenter: Julie is, of course, er, John, who is currently over in, er, Vancouver at the Olympic Games, John Jackson in the bobsleigh. This is his mum, I bet you're very proud.

Julie: I am- very, very proud of what he's achieved. I can't explain, I can't tell, start to tell you how I feel about him, [I] just bursting with pride.

Presenter: I was going to say, what sort of, you've just said it's quite hard, but what sort of emotions were you going through, even when you see him? For example, er, in the opening ceremony, knowing that he's going to be there. What was that feeling like?

Julie: Well, he actually, er, we sat up and he actually text me at ten past one in the morning, before it had actually started at quarter to three, quarter to two, and he'd said, 'Oh Mam, I'm lining up now to go out, you know, for the ceremony.' And I started to cry, I got very emotional. It was just 'cause I know he was excited and so proud of himself to do that, to let me know just how he was feeling. Um, and I did, I got very, very emotional. I'm just so proud of him. Yeah.

Presenter: What is it like, from a mother's point of view, watching your son go or get up to 95 de-, er, miles per hour in a little bit of a cart thing on some ice?

Julie: Um, well, I try to watch. There was one race he had in Germany, the first run, oh dear me, he rattled down the ski sl-, like the slope and um, I was, I thought, I was convinced he was going to turn over. And so, he made it through, and he went to the second round, so I sat on the stairs, I wouldn't watch it, but actually, he did really, really well on the second run. I think he just gets nervous first run, but I couldn't bear to watch it, but I watched it, the reply, back and it was fine. It's, I do get nervous, I get very nervous for him.

Presenter, Has he, um, has he ever had any accidents doing his sport?

Julie: Oh, yes, yeah. Um, he was once, as he was driving, but he was brake man, um, for the GB1, and I was actually watching it on TV and I hadn't realized it was John that was pulled out of the back of the sled, the speed, um, until he kind of stood up and hung over a wall and I thought it was just the actions. I knew it was him. Um, and he had the scars when he came back, ice burns right down his back, on his elbows, shoulders, it was really bad. Um, but you just, he said, you've just got to get back in and do it, otherwise you wouldn't, you woundn't get back in again.

Track 2

Presenter: Now, I imagine, I imagine a lot of people have mentioned this before, but the film *Cool Runnings*, does, is John totally sick of people sort of making comparisons between, er, him and *Cool Runnings* in any way?

Julie: No. But believe it or not, that was the , er, film that they requested to play on the plane over to Vancouver, so they played that, 'cause he said it's quite amusing, yeah, they say they look at that, but you can see the funny side to it, you know, as well, so ....

Presenter: And has he got a luck egg? That's the question? Does he kiss his lucky egg?

Julie: I don't know, I'll have to ask him about that, if he has, um, if he's got, you know, a set little way of what he does before he sets off. I know he likes to hold his, he puts his, um, hand up to his head. He has certain mannerisms. Just before he sets off. [Same ritual, isn't?] Same, yeah, every time.

Presenter: Is he quite superstitious, then?

Julie: I don't know. I just don't know if that's just the way he likes to set off with his hands, it's a salute [What does he do when he's driving the car?] Oh, yes, when he drives the car, oh, he'll tell me off for this, he does a hundred-point check before he sets off. His mirror, wide mirror, this, knobs, everything. Then he'll set away. It takes him ten minutes.

Presenter: His normal car? When he just jumps in a car?

Julie: Oh yeah, everything has to be right.

Track 3

Presenter: What do you think his chances are of a medal? Has he spoken about this?

Julie: Um, he wants to get within te-, top ten, 15, but I know how determined he is, and anything can happen. I've been watching the skiing and, you know, there's people that they say, 'Ah, these are the top three,' fine, but actually the pressure's on them to perform, where with John it's not. And he's really very determined person. He likes to be perfect and they've been practicing, so I believe he could win a gold. You want, but you've got to have that belief. You can't go there without having a belief, a-, but he'll give his best. That's all. He'll give it a hundred and ten per cent. That's all I can say.

Appendix E

Pre-teaching vocabulary

Conversation 1

2 Read the article below. Find words or phrases with the same meaning as these.

1 to complain
2 lying comfortably
3 the celebration of 60 years
4 an image which represents something

World's biggest deckchair placed on Bournemouth beach

Weekend visitors to Bournemouth find the beach occupied by a deckchair taller than a double-decker bus.

The red-and-white striped deckchair was specially constructed over a period of three weeks by artist Stuart Murdoch. It was commissioned by a well-known drinks manufacturer to celebrate the start of British Summer Time.

We British love to moan about the weather, but there was nothing to complain about this weekend, with Bournemouth basking in glorious sunshine. With the Queen's Diamond Jubilee and the London Olympics to look forward to, it promises to be a very special summer.

Mr Murdoch chose to make a deckchair because it is an iconic symbol of Britain, like red telephone boxes, black taxis or double-decker buses. He says the public response to his massive chair has been fantastic, with everybody smiling and having their photo taken with it.

3 According to the article, the 'British love to moan about the weather'. These words and phrases are connected with the weather. What do they mean, and why would you moan about them? Compare with a partner.

1 pouring with rain 2 extreme weather 3 a tornado 4 sunstroke

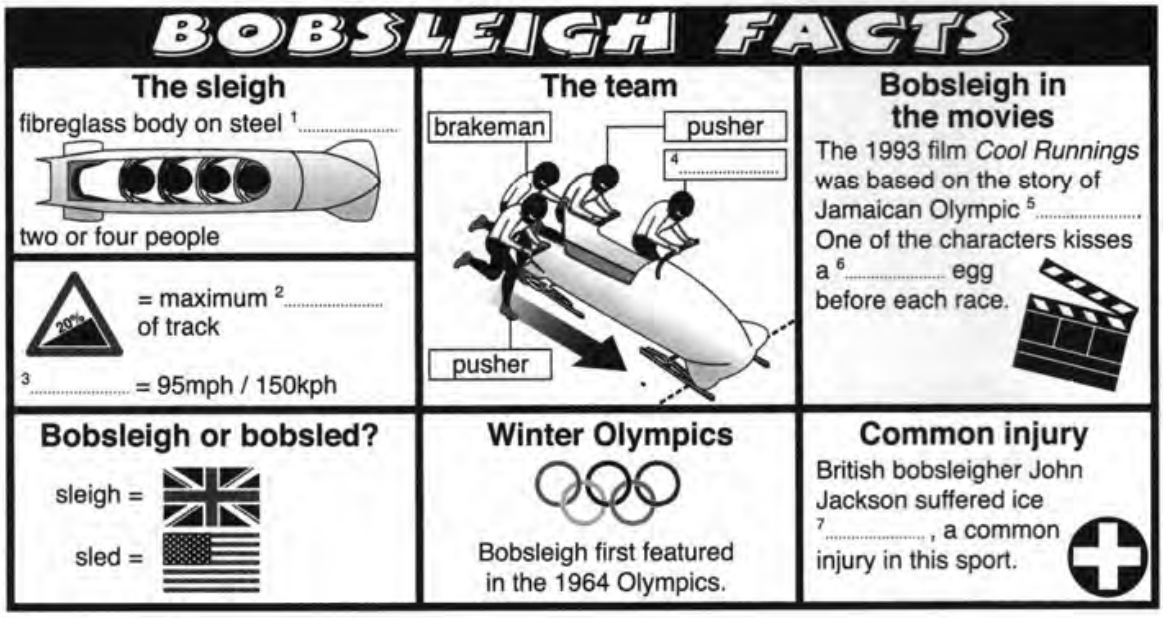
Conversation 2

2 You're going to hear Ian explaining how to make a meal with these ingredients (1–9). What meal do you think he'll make? Discuss with a partner.

Conversation 3

1 Read the infographic below and complete the gaps (1–7) with the words in the box.

burns driver lucky runners slope speed team



Appendix F

Post-test Questionnaire to Students

Dear Students,

The purpose of this questionnaire is to obtain your perception and opinion about the learning of connected speech processes. You are kindly required either to circle the answer that corresponds to you or to provide full answer when necessary. Please answer the questions as clearly as possible. All information will remain anonymous.

Section one: General questions about listening

1-**Do you think that listening to real spoken English is**

a-Extremely difficult?
b-Very difficult?
c-**D**ifficult?
d-Slightly difficult?
e-Not difficult at all?

-Why? Please justify.

.....
.....

2-According to you, is it important to identify every word to understand meaning when listening to English?

a-Extremely important
b-Very important
c-Important
d-Slightly important
e-Not important at all

3-What do you do when a word in the listening material is not recognizable?

a-You ignore the word and focus on the rest of the listening.
b-You try to understand the meaning of the word from the context.
c-You concentrate so much on the word that you miss the rest of the listening.
d-Other, please specify.....
.....

4-In a listening lesson, do you prefer that your teacher uses material that includes

a-simplified and well articulated speech? or
b-normal real speech?
-Why? Please justify.....
.....

5-Is it important to include pronunciation instruction in a listening lessons?
a-Extremely important
b-Very important
c-Important
d-Slightly important
e-Not important at all

Why? Please justify.

.....
.....

Section two: Students' attitudes to connected speech processes

6-To what extent are you motivated to have training on connected speech processes?
a-Extremely motivated
b-Very motivated
c-Motivated
d-Slightly motivated
e-Not motivated at all

Why? Please justify.

.....
.....

7-To what extent is training on connected speech processes useful for your listening ability?

a-Extremely useful
b-Very useful
c-Useful
d-Slightly useful
e-Not useful at all

Why? Please justify.

.....
.....

8-To what extent are you satisfied with the training on connected speech processes?
a-Extremely satisfied
b-Very satisfied
c-Satisfied
d-Slightly satisfied
e-Not satisfied at all

9-If you are not satisfied, is it because

a-the rules of connected speech processes are complicated?

b-the activities on connected speech processes are not useful?

c-your teacher's explanations of connected speech processes are difficult to understand?

d-Other, please specify.....

.....

10-To what extent are perceptual activities (such as dictation and cloze dictation) helpful in improving your listening ability?

a-Extremely helpful

b-Very helpful

c- Helpful

d-Slightly helpful

e-Not helpful at all

Why? Please justify.

.....

.....

11-Do you think that the duration of the training on connected speech processes is appropriate.

Yes ☐ No ☐

12-If not, which of the following connected speech processes do you think you need more training?

a-Assimilation

b-Linking

c-Elision

d-Reduced forms of function words

13-Please, feel free to add any other comments on this topic.

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Thank you for your Cooperation.

Appendix G

Questionnaire to Teachers

Dear Teachers,

The purpose of this questionnaire is to obtain your perception and attitudes towards the teaching of listening. The information you provide will be used as part of a doctoral study conducted at Ecole Normale Supérieure de Bouzareah (ENSB). You are kindly required either to circle the letter that corresponds to you or to provide full answer when necessary. Please answer the questions as clearly as possible. All information will remain anonymous.

-Background information

-Gender: Female ☐ Male ☐

-What is your grade/rank/position? .....

-How long have you been teaching listening? .....

Section one: Pronunciation instruction

1-To what extent is it important to include pronunciation instruction in your listening classes to improve students' listening comprehension? (Please, circle the right answer)

a-Extremely important
b-Very important
c-Moderately important
d-Slightly important
e-Not important at all

-Why? Please justify.

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2-Do you include pronunciation instruction in your listening classes?

a-Yes ☐ **b-**Sometimes ☐ **c-**No ☐

3-How confident are you when including pronunciation instruction in your teaching of listening? (Please, circle the appropriate response)

a-Completely confident

b-Very confident

c-Moderately confident

d-Slightly confident

e-Not confident at all

4-If you include pronunciation instruction in your listening classes, which of the following aspects of English pronunciation do you include?

a-Consonants

b-Vowels

c-Syllable structure

d-Word stress

e-Sentence stress

f-Intonation

g-Connected speech (assimilation, linking, elision, reduced forms of function words)

5-According to you, to what extent should a teacher of listening be aware of English pronunciation rules?

a-To a very large extent
b-To a large extent
c-To a moderate extent
d-To some extent
e-Not at all

6-When you design the content of the material you teach in your listening classes, do you take into consideration possible pronunciation problems (e.g. connected speech)?

a-Yes ☐ **b-**Sometimes ☐ **c-**No ☐

7-What do you do when a common word in the listening material you teach is not recognizable to your students?

a-You just ignore it.

b-You just pronounce it again to make it recognizable.

c-You pronounce it and explain the rules of modification the word has undergone.

d-Other, please specify.....
.....

8-To what extent does the presence of connected speech processes interfere with students' listening comprehension?
a-To a very large extent
b-To a large extent
c-To moderate extent
d-To some extent
e-Not at all

9-Which of the following connected speech processes are you familiar with?
a-Assimilation
b-Linking
c-Elision
d-Reduced forms of function words

10-Do you include instruction on connected speech processes in your teaching of listening?

a-Yes ☐ **b-**Sometimes ☐ **c-**No ☐

11-If No, you do not teach them because you think that these processes:
a-represent fast speech therefore does not suit students' level.
b-represent informal and uneducated speech therefore not academic.
c-represent different English varieties therefore cannot be taught.
d-represent complex rules therefore a teacher of listening is not required to teach them.
e-represent complex rules therefore a teacher of listening needs a training to teach them.
f-represent speech that is addressed to native speakers therefore does not meet students' needs.
g-Other, please specify .....
.....

12-What are the challenges a teacher of listening faces when including pronunciation instruction in general and connected speech processes in particular?

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Section two: General questions about listening

13-How do you describe the listening curriculum of ENSB?

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14-To what extent are you satisfied with your teaching of listening? Please, circle the right answer.

a-Completely satisfied
b-Very satisfied
c-Moderately satisfied
d-Slightly satisfied
e-Not satisfied at all
-Why? Please justify.

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15-How difficult is it to teach listening?

a-Extremely difficult
b-Very difficult
c-Moderately difficult
d-Slightly difficult
c-Not difficult at all
-Why? Please justify.

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16-Do you use material that includes

a-simplified and well articulated speech?

b-normal real speech?

c-Other, please specify.....

.....

-Why? Please justify.

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17-Do you agree with the statement that listening is generally tested and not taught?

a-Strongly agree

b-Agree

c-Neither agree nor disagree

d-Disagree

e-Strongly agree

18-Do you include perceptual activities (e.g. dictation and cloze dictation) in your listening classes?

a-Yes ☐ **b-**Sometimes ☐ **c-**No ☐

-Why? Please justify.

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19-Please, feel free to add any other comment on this topic.

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Thank you for your Cooperation.

Appendix H

Programme for the remaining weeks of perceptual training on connected speech processes

<table>
<tr><th colspan="3">Week 6</th></tr>
<tr><th>Level: First year students at ENSB</th><th>Connected speech processes
Lesson on linking (2)</th><th>Lesson length: 25 minutes</th></tr>
<tr><td colspan="3">Objectives: Introduce the rest of the linking rules.</td></tr>
<tr><td colspan="2">Procedure
In the previous lesson, some linking rules are introduced; in this lesson, the rest of the rules are presented.
✶ Linking identical consonants
When a word ends in a consonant that is identical to the consonant that begins the following word, the consonant is pronounced only once, and the consonant is lengthened. To show this length mark is used. Students listen to the following examples taken from Mojsin, 2009, and notice how identical consonants are pronounced at word boundaries. the length mark [:];
1. big game
2. well lit
3. can never
4. good day
5. this Saturday
6. far right
7. stop playing
8. Tom might
9. book club
10. what time
✶ Linking vowel to vowel
When a word ends in a vowel and the next word starts with a vowel, the two words can be linked in three ways, either with intrusive /r/, /ʲ/, or /ʷ/.
a. Intrusive /r/
To ease the articulation from a word ending in a vowel to the following word starting with a vowel, native speakers insert the sound /r/, even though there is not the letter /r/ between the two words. This is done especially when the first word ends in /ə/, /ɑ:/ or /ɔ:/.
The students listen to the following sentences (taken from Kelly, 2000) and focus more on the intrusive /r/ at word boundary.
1. Princess Diana was a victim of media‿exploitation.
2. The media‿are to blame.
3. It’s a question of law‿and order.</td><td>Answers
1. [bɪg:eɪm]
2. [wel:ɪt]
3. [kən:evə]
4. [gʊd:eɪ]
5. [ðɪs:æʃədeɪ]
6. [fɑ:r:aɪt]
7. [stɒp:leɪɪŋ]
8. [tɒm:aɪt]
9. [bʊk:lʌb]
10. [wɒt:aɪm]

1. [mi:dɪərekspləɪteɪʃn]
2. [mi:dɪərɑ:]
3. [lɔ:rən]
4. [sɔ:rɪ]</td></tr>
</table>

4. I saw‿it happen.

b. Intrusive/j/ and /w/

When a word ends with one of the following vowels: /ɪ/, /i:/, /eɪ/, /aɪ/, and /ɔɪ/, is followed by another word which starts with a vowel, the intrusive [ʲ] is inserted.

When a word ends in /ʊ/, /u: /, /əʊ/, and /aʊ/, and the following word begins with a vowel, the intrusive [ʷ] is inserted. The students listen to the following examples taken from Mojsin (2009), and try to figure out the sound that is inserted at word boundary.

1. I ate out.
2. Go on.
3. They agree.
4. I know it.
5. May I come in?
6. So awesome!
7. I'll buy it.
8. He ate out.

Answers

1. [a**ʲ**eɪtaʊ]
2. [gə**ʊʷɒ**n]
3. [ðeɪ**ʲə**gri:]
4. [aɪnə**ʊʷɪ**t]
5. [meɪ**ʲa**ɪkʌmɪn]
6. [sə**ʊʷɔ**:səm]
7. [aɪlbaɪ**ʲɪ**t]
8. [hɪ**ʲeɪ**taʊ]

Week 7

Level: First year students at ENSB	Connected speech processes Practicing linking	Lesson length: 25 minutes

Objectives: Practicing linking so that the students become familiar with the different ways native speakers link words using phrases.

Procedure

Task 1: Linking consonant to vowels

The teacher writes the transcribed utterances below. She then asks her students to find out whether these transcribed utterances refer to the ones in column **A** or column **B**.

1. [həʊldɒn]
2. [aɪlaɪkɪt]
3. [di:pend]
4. [getʌpleɪt]
5. [pɪktaʊt]
6. [ðɪsgaɪ]

After finishing the task, the students check the right pronunciation of these utterances by listening to a recording taken from Mojsin (2009).

Task 2: Though most of the phrases seem to have almost the same pronunciation, there is a subtle difference in some of them. The students are required to listen again and find out the subtle nuances between utterances in A and B.

Answers to task 1

Both utterances in **A** and **B** have almost the same pronunciation; there are only subtle nuances.

A		**B**
1. hold on	or	**"**whole Don**"**
2. I like it	or	**"**I lie kit**"**
3. deep end	or	**"**depend**"**
4. get up late	or	"get a plate"
5. picked out	or	"pick doubt"
6. this guy	or	"the sky"

Answers to task 2

1. The word 'hold' bears more stress than 'on' and **'**Don' bears more stress than 'whole'.
2. The word 'kit' bears more stress than 'like it'.
3. The stress is on the 1st syllable of **'**deep end'; the stress is on 2nd syllable of 'depend'.
4. The phrase 'get up' [ge**ɾ**ʌp] has a strong vowel, and 'get a' [geɾəp] has a weak vowel)

Task 3: Linking identical consonants **a.** The teacher follows the same steps as the previous exercise. At the end, the students check the right pronunciation of these phrases by listening to a recording taken from Mojsin (2009). **1.** [ʃɪspi:kspænɪʃ] **2.** [tɜ:ndaʊn] **3.** [helpɔ:l] **4.** [welɪt] **5.** [blækæt] **6.** [fɒrəneɪm] **b.** The teacher asks her students to justify their choice of the correct answers.	**5.** The phrase 'picked out' is pronounced as [pɪ**kt**aʊt], whereas 'pick doubt' is pronounced as [pɪ**kd**aʊt]. **6.** The vowel in 'this' [ðɪs] is longer than in 'the' [ðə]. **Answers to task 3** **a. Answers:** The phrases in bold correspond more to the pronunciation in the recording. **A** **B** **1. She speaks Spanish**. or She speak Spanish. **2. turned down** or turn down **3. help Paul** or help all **4. well lit** or well it **5. black cat** or black at **6. foreign name** or foreign aim **b. Answer** The words in **A** have identical sounds across word boundaries, so they are lengthened, whereas words in **B** are consonant vowel linking, so there is no lengthening at word boundary.

Week 8		
Level: First year students at ENSB	**Connected speech processes Practicing linking**	**Lesson length: 25 minutes**
Objectives: To practicing and reinforce students' perception of linking using short dialogues.		

Procedure **Task 1: Dictation** The students are asked to listen to a short dialogue and to write down what they hear. The dialogue, taken from Mojsin (2009), contains words which end with consonants followed by words which begin with vowels. The teacher stops the recording after each sentence to allow students to write. At the end, the recording is played one more time so that the students to check their answers.	**Answers** **A:** Ca**n**‿**I** co**me**‿**i**n? **B:** Yes, co**me**‿**o**n‿in. The doo**r**‿**is**‿**o**pen. **A:** Shoul**d**‿**I** lea**ve**‿**it**‿**o**n? **B:** No, tur**n**‿**it**‿**o**ff. **A:** What ti**me**‿**is**‿**it**? **B:** It's‿**a**lready fi**ve**‿**o**'clock.
Task 2: Cloze dictation Students are required to fill in the missing parts of the dialogue taken from Cleary et al. (2003). In this exercise the focus is put on linking by inserting /ʲ/ and /ʷ/ **A:** I heard there's a wonderful chocolate cake. **B:** All gone, I'm afraid. **A:** All gone? .....? **B:** I don't know, I think ..... **A:** Erica? **B:** No, I'm just kidding. ..... Finished it all.	**Answers** **A:** I heard there's a wonderful chocolate cake. **B:** All gone, I'm afraid. **A:** All gone? Wh**o a**te it? **B:** I don't know, I think Eric**a a**te it. **A:** Erica?

A: Well, we'll have to ..... The teacher explains that the missing words are linked by inserting either /^{j}/ such as 'Eric**a a**te' and **'I a**te', or /^{w}/ such as 'Wh**o a**te' and 'yo**u o**n'.	**B:** No, I'm just kidding. **I a**te it. Finished it all. **A:** Well, we'll have to put yo**u o**n a diet.

Week 9		
Level: First year students at ENSB	**Connected speech processes Reviewing Linking**	**Lesson length: 25 minutes**

Objectives: Practicing linking so that the students become familiar with the elision of consonants occurring across word boundaries.

Procedure	**Answers**
Task 1: Dictation The students are asked to listen to a dialogue, taken from Mojsin (2009), and to write down what they hear. The exercise contains all kinds of linking, linking consonants to vowels, linking identical consonants, or linking by inserting w, j, or r. The dots in black indicate where the teacher stops the recording. After finishing the recording, the students listen to the recording in order to make any necessary correction. At the end, they correct the exercise with the help of their teacher.	**Mastering the American Accent** I've been practicing the American accent ● for a while now. At first, ● it was kind of hard ● to keep track of all the rules and exceptions. I had no idea ● there was so much to learn. I've been practicing ● with the audio materials. ● It's somewhat easier ● to pronounce some of the sounds ● but it's difficult to know ● how I sound to others. I think I'm getting better. One of the hardest things for me ● is to stress some syllables ● and to reduce certain others. When I ask my friends ● how I sound, they all say ● they hear a difference in my speech. My boss said ● that I am making progress ● and that I sound ● more and more like a native speaker. My clients are not asking me ● to repeat myself as much. It makes it all worthwhile. I won't stop practicing.
Task 2: The students are asked to listen to the dialogue for the last time, and to find out all examples of linking.	**Answers** I've been practicing th**e^{y}A**merica**n**∪**a**ccent fo**r**∪**a** while now. At first, it was kin**d**∪**o**f hard to keep trac**k**∪**of**∪**a**ll the rule**s**∪**a**n**d**∪**e**xceptions. I had n**o^{w}i**dea there was∪**s**o much to learn. I've been practicing with th**e^{y}a**udio materials. It'**s**∪**s**omewha**t**∪**e**asier to pronoun**ce**∪**s**om**e**∪**of** the sounds bu**t**∪**i**t's difficult to know ho**w^{w}I** sound t**o^{w}o**thers. I think I'm getting better. On**e**∪**o**f the hardest things for me is to stres**s**∪**s**ome syllables and to redu**ce**∪ certai**n**∪**o**thers. Whe**n**∪**I ^{y}a**sk my friends ho**w^{w}I** sound, the**y^{y}a**ll say they hea**r**∪**a** differen**ce**∪**i**n my speech. My bos**s** **s**aid tha**t**∪**I** a**m**∪**m**aking progres**s**∪**a**nd that∪I

	sound more‿and more like‿**a** native speaker. My client**s**‿are no**t**‿**a**sking me to repeat myse**l**f‿**a**s much. It make**s**‿**i**t‿all worthwhile. I won't sto**p**‿**p**racticing.

Week 10		
Level: First year students at ENSB	**Connected speech processes /t/ variations at word boundaries**	**Lesson length: 25 minutes**

Objective: Practicing linking so that the students become familiar with the different ways native speakers link words.

Procedure: It is important to explain that the consonant /t/ is a sound that is easily influenced by the surrounding sounds; and it can therefore be pronounced in different ways. **1. Pronounced as a glottal stop[ʔ]** Students are required to listen to a sentence taken from Collins & Mees (2013) and to notice the pronunciation of /t/ as a glottal stop [ʔ] at word boundaries. *I've got to put a lot of butter on that little bit of bread* Note that because [ʔ] isn't a phoneme, we have to enclose this transcription in square brackets. **2. Pronounced as a flap[ɾ] or [D]** The sound /t/ may be pronounced as a flap when it is between vowels. Students are required to listen to some examples, taken from Mojsin (2009), where /t/ is pronounced a flap at word boundaries. **1.** it is **2.** get up **3.** try it on **4.** eat out **5.** at eleven **6.** wait a minute **7.** what if **8.** put it off The symbol [tˀ] means that the plosion of the sound /t/ is inaudible and unreleased. Finally, the sound /t/ may not be pronounced at all, i. e. it undergoes elision, a process that will be covered in the following lesson.	**Answers to task 1** [aɪvgɒʔəpʊʔəlɒʔəbʌʔərənðæʔlɪʔlbɪʔəbred] **Answers to task 2** **1.** [I**ɾ**Iz] **2.** [ge**ɾ**ʌp] **3.** [traɪ$^{(j)}$ ɪ**ɾ**ɒn] **4.** [iː**ɾ**aʊtˀ] **5.** [ə**ɾ**ɪlevən] **6.** [weɪ**ɾ**əmɪnɪtˀ] **7.** [wæ**ɾ**ɪf] **8.** [pʊ**ɾ**ɪtɒf]

Week 11		
Level: First year students at ENSB	**Connected speech processes Lesson on Elision**	**Lesson length: 25 minutes**

Objectives: Introduce examples of elision in order to draw students' attention to the disappearance of some consonants especially at word boundaries.

Procedure:

The teacher explains to the students that some sounds disappear in connected speech, a process that is known as elision. There are two sounds /t/ and /d/ that are frequently elided, especially when they are found within a consonant cluster, either within words or between words.

Students then listen to some examples and notice how /t/ and /d/ are elided. The examples are taken from Underhill (1994).

Deletion of /t/

1. next please
2. I don't know
3. post the letter

Deletion of /d/

4. old man
5. you and me
6. sandwich
7. stand there

1. [nekspli:z]
2. [aɪdəʊnnəʊ]
3. [pəʊsðəletə]

4. [əʊlmæn]
5. [ju:ənmi:]
6. [sænwɪʧ]
7. [sænwɪʧ]

Task 1: Students are asked to listen to sentences taken from Vaughan-Rees (2002), and find out how the words in bold are pronounced.

1. Let's face the **facts**. This company is going to **bust quickly.**
2. My **landlady** bought a new **handbag** the other day.
3. The **second boy** waited for half an hour.
4. I **don't know** when they **finished work** yesterday.
5. I **don't** like **fast food** as a rule.
6. It was a perfect afternoon, **perfectly** marvelous.
7. Raise both your **hands** slowly into the air.
8. I **watched TV** most evenings, in fact I **watched for** five hours **last night.**

Answers to task 1

1. Elision of /t/ within words [fæks] and between words [bʌskwɪklɪ]
2. Elision of /d/ within a word [lænleɪdɪ] and [hænbæg]
3. [sekənbɔɪ] elision of /d/
4. [dəʊnnəʊ] and [fɪnɪʃwə:k]
5. [fæsfu:d]
6. [pə:fɪklɪ] /t/ is elided
7. [hænz] elision of /d/
8. [wɒʧti:vi:], [wɒʧfə] and [læsnaɪt]

✶ Important

It is important to explain that even negative /t/ in *don't*, and the final /d/ or /t/ in past tenses as in *finished* and *watched* disappear, especially when the following word starts with a consonant.

Week 12

Level: First year students at ENSB	Connected speech processes Practicing elision	Lesson length: 25 minutes

Objectives: Practicing elision so that the students become familiar with the elision of consonants occurring across word boundaries.

Objectives: Reinforcing students' perception of elided consonants at word boundaries.

Procedure

After introducing rules on elision in the previous lessons, especially at sentence level, the students are required to do listening practice to improve their perception of consonant loss at word boundaries, in particular at text level.

Task 1: Students are given a handout including the text below (taken from Clare et al. (2013). They are asked to listen to it and focus more on the underlined consonant clusters, to say whether there is any consonant elision or not, and to identify the elided consonant.

He loo**ks pr**etty **(1)** ordinary, you know, a**nd h**e **(2)** won**'t m**ake **(3)** any hea**ds t**urn **(4)** as he wa**lks d**own **(5)** the street. You do**n't r**eally **(6)** notice anything unusual unless you take a dire**ct l**ook **(7)** straight into his eyes. Tha**t's w**hen **(8)** you realise that one is the darke**st ch**ocolate **(9)** brown a**nd t**he **(10)** other is a so**ft li**ght **(11)** honey colour.

✶ **Important**

The sounds /t/ and /d/ are never elided in initial position, as shown in examples **4** and **5**, but usually elided in final position.

Task 2: Students are required to listen to a short story about a family secret (taken from Clare et al., 2013), and to fill in the blanks with the missing words which undergo consonant elision at word boundaries.

Our kids..... **(1)** asking for a dog for about a year ..... **(2)** steadfastly refusing, so when we finally relented, we ..... **(3)** keep it a secret. I..... **(4)** pick up the pup on my own and ..... **(5)** kids and their ..... **(6)** meet me in the park. When they saw me with the dog, they ..... **(7)** whose she was. When I ..... **(8)** yours, their mouths literally fell open with surprise ..... **(9)** no idea. We were very proud ..... **(10)** have ..... **(11)** cat (or should ..... **(12)** 'dog'?!) out of the bag!

Task 3: They are required to identify the consonants that are elided.

Answers to task 1

1 No consonant elision
2 [ə**n**ɪ] elision of /d/ and /h/ of *he*
3 [wəʊ**mm**eɪk] elision of /t/
4 No consonant elision
5 No consonant elision
6 [dəʊ**nr**ɪəlɪ] elision of /t/
7 [daɪre**kl**ʊk] elision of /t/
8 [ðæ**sw**en] elision of /t/
9 [dɑ:kə**stʃ**ɒklət]
10 [ə**nð**ɪ] elision of /t/ & /d/
11 [sɒ**fl**aɪt] elision of /t/

Answers to task 2

(1) had been
(2) and we had been
(3) decided to
(4) went to
(5) asked the
(6) dad to
(7) asked me
(8) said she
(9) had had
(10) not to
(11) let the
(12) that be

Answers to task 3

(1) had been **(2)** and we had been **(3)** decided to **(4)** went to **(5)** asked the **(6)** dad to **(7)** asked me **(8)** said she **(9)** had had **(10)** not to **(11)** let the **(12)** that be	**(1)** [əbɪn] → elision of /h/ and /d/ **(2)** [ənwɪdbɪn]→ elision of /d/, /h/ and /ə/ **(3)** [dɪsaɪdtə] → elision of /d/ **(4)** [wentə] → elision of /t/, **(5)** [æskðə] → elision of /t/, **(6)** [dætə] → elision of /d/, **(7)** [æskmɪ] → elision of /d/, **(8)** [seʃɪ] → elision of /d/, **(9)** [ədhæd] → elision of /h/ **(10)** [nɒtə] → elision of /t/ **(11)** [leðə] → elision of /t/ **(12)** [ðæbɪ] → elision of /t/

Week 13		
Level: First year students at ENSB	**Connected speech processes Reviewing linking and elision**	**Lesson length: 25 minutes**

Objectives: Reviewing linking and elision in order to reinforce students' perception of the two processes.

Instruction	
Task 1: Dictation The students are asked to listen to six sentences, taken from Cleary et al. (2003), and to write down what they hear. The sentences contain examples of linking and elision. **Task 2:** Students are asked to show the consonants that are elided and the ones that are linked. **Task 3:** You will hear a short dialogue taken from Cleary et al. (2003). Write down what you hear from the recording. **Task 4:** Students are asked to show the consonants that are elided and the ones that are linked. **Task 5: Gap filling** Students are asked to listen to a story taken from Clare et al. (2013), and to fill in the blanks with the missing words. Students are required to find two words in a blank; the first word in each blank undergoes elision of a consonant. My **(1)**..... was a **(2)**..... or **(3)**.....she thought it was a secret, whereas in **(4)**..... whole family knew. But in order **(5)**..... we all **(6)**.....	**Answers for tasks 1 and 2** **1.** migh~~t~~ ge~~t~~ lost‿if‿I don'~~t~~ have‿a map. **2.** I can'~~t~~ see ~~h~~im tomorrow nigh~~t~~. **3.** We'll probably stop‿in‿a~~t~~ the Service Coun~~t~~er. **4.** He's no~~t~~ going to ea~~t~~ some‿more, is he? **5.** The plan's pretty good, isn~~'t~~ i~~t~~? **6.** I don**'t** think I can‿meet‿~~h~~er tonigh~~t~~. **Answers to task 3 and 4** **A:** I got‿a grea~~t~~ deal‿on this car. **B:** How much did‿i~~t~~ cos~~t~~? **A:** They usually cos~~t~~ 30,000 dollars, but‿I go~~t~~ mine for twenty three. **B:** So you save~~d~~ seven thousan~~d~~ dollars. Wow! **Answers to task 5** My **(1) grandmother** was a **(2) secrets smoker, or (3) at least** she thought it was a secret, whereas in **(4) fact the** whole family knew. But in order **(5) not to upset her** we all **(6) used to** play along. When she visited

play along. When she visited our house, **(7)**..... into the bathroom to smoke. Me **(8)**..... brothers **(9).....**..... out into the garden **(10)**..... the **(11)**..... from the bathroom window **(12)**..... at our **(13)**.....!	our house, **(7) she'd go** into the bathroom to smoke. Me **(8) and my** brothers **(9) would go** out into the garden **(10) and watch** the **(11) smoke coming** from the bathroom window **(12) and giggle** at our **(13) shared secret!**

Week 14

Level: First year students at ENSB	Connected speech processes Function words	Lesson length: 25 minutes

Objectives: Explain the possible forms that function words undergo; i.e. they can be pronounced in their strong forms (citation forms) and in their week forms (reduced forms), depending on the contexts in which they occur.

Procedure:

Teacher explains that to maintain the English rhythm some syllables are stressed and others are unstressed. So, the stressed syllables occur at regular intervals in order to maintain a regular beat which refers to a stressed syllable. So, stressed syllables always take an entire beat, while unstressed syllables or words occur between the beats, this gives the impression that they are compressed. It is important to explain that there are two groups of words in English, **content words** which express independent meaning such as nouns, verbs, adjectives, adverbs, and demonstratives; and **function words** which do not add meaning to a sentence or utterance such as auxiliary verbs, prepositions, conjunctions personal pronouns, and determiners.

Task 1: Students listen to examples taken from Collins & Mees (2013). The stressed syllables are written in bold.

1. Jimmy's **bought** a **house near Glas**gow.
2. Sally's been **try**ing to **send** you an **e-m**ail.
3. Alastair **claimed** he was **sel**ling the **com**pany.

Task 2: The teacher points out that most function words are reduced to schwa. To demonstrate this, a handout containing a listening exercise, taken from Marks & Bowen (2012), is handed to the students. It contains function words written in their phonetic symbols and are all pronounced as schwa [ə]. The students are required to listen and to identify them.

1. one **[ə]** two days
2. [ə] cup **[ə]** tea
3. What [ə] you doing?
4. I'm staying **[ə]** week.
5. I've got Diane's address, but what's **[ə]** phone

Answers to task 2

1. one **or** two days
2. a cup **of** tea
3. What **are** you doing?
4. I'm staying **a** week.
5. I've got Diane's address, but what's

number? **6. [ə]** really don't know what to do. **7.** We definitely could **[ə]** played better. **8.** I haven't seen **[ə]** for ages. **9.** There's **[ə]** load **[ə]** work to do.	**her** phone number? **6. I** really don't know what to do. **7.** We definitely could **have** played better. **8.** I haven't seen **her** for ages. **9.** There's **a** load **of** work to do.

Week 15		
Level: First year students at ENSB	**Connected speech processes** **Function words**	**Lesson length: 25 minutes**

Objectives:	
Teacher explains that function words can be pronounced in their strong forms and in their weak forms. To illustrate this, she plays the recording from Kelly (2000), **1.** She **can**$^{(1)}$ /kən/ swim faster than I **can**$^{(2)}$ /kæn/. **2.** She's **from**$^{(1)}$ /frəm/ Scotland. **3.** Where are you **from**$^{(2)}$ /frɒm/? However, most of the time function words are pronounced in their weak forms; and many of them are reduced to schwa /kən/. To show this, the teacher introduces the task below. **Task 1:** The teacher gives a handout containing eight short dialogues taken from Hewings (2004). These dialogues include function words that can be pronounced in their strong forms and in their weak forms depending on the position they appear. With the help of the teacher, students are ask to listen and to notice how the words in bold are pronounced?	**Answers to task 1**
1. Some **A:** That cake smells good. **B:** Do you want **some** $^{(1)}$? **A:** I'm hungry. B: There's **some** $^{(2)}$ soup in the fridge.	**some** $^{(1)}$ [sʌm] (strong form) **some** $^{(2)}$ [səm] (reduced form)
2. The **A:** My music teacher is George Bush. **B:** Not **the** $^{(1)}$ George Bush, surely. **A:** Which is your house? **B:** It's **the** $^{(2)}$ one on the right.	**the** $^{(1)}$ [ði:] (strong form) **the** $^{(2)}$ [ðə] (reduced form)
3. Was **A:** Did you enjoy the film? **B:** I thought it **was** $^{(1)}$ great. **A:** I didn't see you at the meeting. Why weren't you there? **B:** I **was** $^{(2)}$ there.	**was** $^{(1)}$ [wəz] (reduced form) **was** $^{(2)}$ [wɒz] (strong form)
4. Could **A:** Did you get any questions wrong? **B:** Just one. I spelt **'could'** $^{(1)}$ C-U-L-D. **A**: I'm going to the conference, too. **B:** Maybe we **could** $^{(2)}$ go together.	**could** $^{(1)}$ [kʊd] (strong form) **could** $^{(2)}$ [kəd] (reduced form)
5. From	

A: What are you reading? **B:** It's a letter **from** (1) Alice. **A:** Is this a present for Bob? **B:** No, it's **from** (2) Bob. **6. Your** **A:** I'm going to Hungary next week. **B:** Are you going on **your** (1) own? **A:** Why did you put 'Mistake' here? **B:** You've written **'your'** (2) instead of **'you'**. **7. For** **A:** I like those flowers. **B:** They're **for** (1) Jane. **A:** Have you got any matches? **B:** What do you need them **for** (2)? **8. Should** **A:** What time do you have to be at work tomorrow? **B:** Well, I **should** (1) be there by 7.3°, but I don't like getting up early. **A:** My new printer doesn't work properly. **B:** You **should** (2) take it back.	**from** (1) [frəm] (reduced form) **from** (2) [frɒm] (strong form) **your** (1) [jə] (reduced form) **your** (2) [jɔ:] (strong form) **for** (1) [fə] (reduced form) **for** (2) [fɔ:] (strong form) **should** (1) [ʃəd] (reduced form) **should** (2) [ʃʊd] (strong form)
Task 2: Students are required to listen to ten short dialogues, taken from Marks & Bowen (2012), and decide whether the underlined words are pronounced in their strong or reduced forms. This time, students work in pairs to do the task below. 1 A More? B No thanks. I **have** (1) had plenty. 2 A **There is** (2) plenty of cheese in the fridge. B I **could not** (3) see any. 3 A I hope **I will** (4) see you at the meeting tomorrow. B I am afraid I **will not** (5) be there. 4 A You **must** (6) be pleased with the results. B **I am** (7). 5 A I wish **you had** (8) been there. B I just **could not** (9) spare the time. 6 A Have they **been** (10), here before? B **He has** (11), but she **has not** (12). 7 A You need not stay. if **you have** (13) got things to do. B I think **I will** (14) be off, then. 8 A I thought you **were** (15) in London today. B **I am**(16) in London. **That is** (17) where **I am** (18) phoning from. 9 A Look over there - what **has** (19) happened?, B I think **there has** (20) been an accident. 10 A Here **we are** (21). This is the place. B I **did not** (22) think it **would** (23) take so long to get here.	**Answers to task 2** [aɪv] (1) (reduced) [ðəz] (2) (reduced) [kʊdnt] (3) (strong) [aɪl] (4) (reduced) [wəʊnt] (5) (strong) [məs] (6) (reduced) [aɪæm] (7) (strong) [jəd] (8) (reduced) [kʊdnt] (9) (strong) [bɪn] (10) (reduced) [hæz] (11) and [hæznt] (12) (strong) [jəv] (13) (reduced) [aɪl] (14) (reduced) [wə] (15) (reduced) [aɪæm] (16) (strong), [ðæts] (17) (reduced) [aɪm] (18) (reduced) [wɒts] (19) (reduced) [ðəz] (20) (reduced) [wɪɑ:] (21) (strong) [dɪdnt] (22) and [wəd] (23) (reduced)

Week 16

Level: First year students at ENSB	Connected speech processes Function words	Lesson length: 25 minutes

Objectives: Reinforcing students' perception of the reduced forms of function words.

Procedure

In the previous lesson, the weak and strong forms of function words are presented. In this lesson the focus is on the reduced forms of function words.

Task 1: Cloze dictation

Students are required to hear ten sentences (taken from Hewings, 2004).

a. They are asked to identify the number of words they hear in each sentence.

b. They are given a handout containing the ten sentences from which all function words are removed, and are asked to listen again and to fill in with the missing words.

1. When (1)..... finish work?
2. I met (2)..... university.
3. I (3)..... see (4)..... about five minutes.
4. He (5)..... give (6)..... back.
5. (7)..... two presents (8)..... Thomas.
6. (9)..... want (10)..... go.
7. (11)..... those (12)..... ones (13)..... ordered?
8. (14)..... better (15)..... brother (16)..... tennis.
9. (17)..... want (18).....give (19)..... call?
10. (20)..... my friends (21)..... there.

Task 2: Dictation

Students are asked to listen to ten sentences taken from Hewings (2004), and to write down what they hear. The teacher plays the recording many times, if necessary, to help learners identify the weak forms of function words and to train their ears to real spoken English.

Answers to task 1-a

1-5	2-5	3-8	4-7	5-6
6-7	7-7	8-8	9-9	10-8

Answers to task 1-b

1. does she (1)
2. him at (2)
3. can (3) them for (4)
4. will not (5) us them (6)
5. There were (7) from (8)
6. She does not (9) you to (10)
7. Are (11) the (12) that he (13)
8. He is (14) than (15) his at (16)
9. Do you (17) me to (18) her a (19)
I0. Some of (20) should have been (21)

Answers to task 2

1 She's taller than me.
2 Does Ken come from London?
3 It's a card for Ron.
4 Where shall I put your books?
5 I cannot see him now.
6 Did you go shopping at lunchtime?
7 Let us go and have a drink.
8 We would like to meet her some time.
9 I have got your hat but not your coat.
10 I would like some more of that one as well.

Week 17

Level: First year students at ENSB	Reviewing connected speech processes	Lesson length: 25 minutes

Objectives: Reviewing all aspects of connected speech processes.

Procedure

After studying connected speech processes one

by one to facilitate their learning, this session is meant to review these aspects together by including three exercises. **Task 1:** Students listen to nine transcribed sentences (taken from Vaughan-Rees, 2002). They are required to write each sentence down in normal spelling. **1** [dʒəwʌnəkʌpəti:] **2** [jəmʌsbɪdʒəʊkɪŋ] **3** [kʌmɒfɪt] **4** [ʃʌtʌp] **5.** [aɪmwɔ:naʊt] **6** [fænsɪjəbaɪtwi:t] **7** [aɪmwɒftəbed] **8** [gɒtənɪʧeɪdʒ] **9** [gɒtəgəʊtwə:k] **Task 2:** Students listen to five sentences (taken from Roach 1991). They are asked to: **a.** Write each sentence down in normal spelling.	**Answers to task 1** **1** Do you want a cup of tea? **2** You must be joking! **3** Come off it! **4** Shut up **5** I'm worn out. **6** Fancy a bite to eat? **7** I'm off to bed. **8** Got any change? **9** Got to go to work. **Answers to task 2-a** **1** I suppose the best thing is to try later. **2** If he's coming today there ought to be a letter around. **3** The world's greatest lawn tennis festival begins on Monday. **4** We've fixed for the repair man to come and mend it under guarantee. **5** The number's been engaged for over an hour.
b. Transcribe what you hear, by taking into consideration all the modifications that occur.	**Answers to task 2-b** **1** [aɪspəʊzðəbesθɪŋztətraɪleɪtə] **2** [ɪfɪzkʌmɪŋtədeɪðərɔ:t:əbɪəletərəraʊd] **3** [ðəwə:lzgreɪtlɔ:ntenɪsfestəvəlbɪgɪnz əmmɒndeɪ] **4** [wɪffɪksfəðərɪpeəmæntəkʌməmmendɪt ʌndəgærənti:] **5** [ðənʌmbəzbɪnɪŋeɪdʒfərəʊvəənaʊə]

Week 18		
Level: First year students at ENSB	**Connected speech processes Practice on elision**	**Lesson length: 25 minutes**
Objectives: The aim of this lesson is to draw students' attention to the difference to informal speech which has certain characteristics that distinguish it from formal speech.		
Procedure: The teacher explains the difference between formal and informal speech by providing examples below. **1.** Sentences are shortened and grammar is simplified. For example, -"Do you want to go?" becomes [wɒnəgəʊ]. **2.** Not all consonants are pronounced. For example, - "I don't know" **becomes** [aɪdʊnəʊ].		

Task: The table below contains some rules of the simplifications that are made in informal speech (taken from Mojsin, 2009). The students are required to listen and notice how the utterances in formal speech change when said in informal situations; by indicating the phonological changes that these utterances undergo.

Formal speech	Informal speech	Examples
1. you	**[jə]**	I'll call ya. See ya.
2. because	**[kəz]**	I did it 'cuz I wanted to. I'm tired 'cuz I worked all day.
3. I don't know	[**aɪdʊnəʊ**]	I dunno why. I dunno what to do.
4. let me	**[lemɪ]**	Lemme do it. Lemme help you. Lemme talk to him.
5. give me	[**gmɪ**]	Gimme a call. Gimme a break! Can you gimme a minute?
6. did you...?	**[ʤə]**	Joo call me? Why joo do it? Joo go out last night?
7. do you want to...?	**[wɒnə]**	Wanna go out? Wanna dance? What do you wanna do?
8. have got to...	**[aɪgɒtə]**	I gotta go. You gotta do it.
9. should've **10.** would've **11.** could've **12.** must've	**[ʃədə]** **[wədə]** **[kədə]** **[məstə]**	You shoulda told me. It woulda been nice. We coulda come. You musta seen it.
13. You shouldna done that. **14.** I woundna known. **15.** It couldna happened.	**[ʃədnə]** **[wədnə]** **[kədnə]**	You shouldna done that. I woundna known. It couldna happened.
16. going to	**[əmgɒnə]**	I'm gonna go. It's gonna rain. What are you gonna do?
17. what do you...?	**[wɒʤə]**	Whadda you want? Whadda you doing? Whadda you think?

Week 19

Level: First year students at ENSB	**Connected speech processes** **Practice on elision**	**Lesson length: 25 minutes**

Objectives: Practicing elision so that the students become familiar with the elision of consonants occurring across word boundaries.

Procedure	
Task 1: Dictation Students listen to 18 sentences representing	**Answers** **1** How do you do?

casual, informal style, taken from Marks & Bowen, 2012). They are required to write down what they hear. With the help of the teacher, students correct the exercise. The teacher points out to the difference between the way words are spelt and the way they are pronounced.	**2** Here you are. **3** Is he in? **4** It'll take a couple of days. **5** He told me to wait here. **6** Do you know her? **7** What shall we do? **8** What do you want? **9** I won't be there. **10** Do you want to come with us? **11** What's wrong with it? **12** Have you seen her yet? **13** I wouldn't have done that. **14** Would you like another one? **15** Some of them are better than others. **16** How much longer is it going to take you? **17** Hadn't we better be going? **18** Wouldn't you rather go with them?
Task 2: A handout containing short dialogues (taken from Marks & Bowen, 2012) is distributed to the students. These dialogues include many examples of assimilation, elision, linking and the reduced forms of function words.	**Answers** **1** yo**u^{w}o**n -forgo**t t**o **(linking identical consonants)** -I'**ll (reduced form of will)** -b**e^{y}a (linking two vowels)** -bi**t** late **(elision of t)** -tha**t‿a**ll **(linking consonant to vowel)** -no**t t**o ((**linking identical consonants)** **2** have you **(reduced form [həvjə])** -go**t‿a**ny **(linking consonant to vowel)** -we could **(reduced form [wəkəd])** -the**re's a (reduced form and linking [ðəzə])** -bed and breakfast (linking and assimilation [bed**əm**brekfəst] **3** there's any **(reduction and linking [ðəzənɪ]**) -Pass your **(assimilation [pæʃə])**
Task 3: The students are asked to listen to the dialogues below and find out examples of assimilation, elision, linking, and the reduced forms of function words. **1 A:** See you on Saturday, then. **B:** Oh, I forgot‿to say, I'll probably be a bit late. Is that all right? **A:** Yeah, not to worry.	**4** go**t** your **(elision of t and reduction of your)** - said it's -to be **(both are reduced)** ready^{y} at the^{y}end‿of **(linking)**

2 A: Have you got any idea where we could stay? **B:** Yes, there's a nice little bed and breakfast in the village.	
3 A: Don't **suppose there's** any more, is there? **B**: Course there is. **Pass your** plate.	
4 A: Have you got your car back yet? **B:** No, they said it's going to be ready at the end of the week.	
5 A: How's your shoulder? **B:** Still a bit painful but getting better, thanks.	**5** still‿a biʔ **(linking and t is a glottal stop ʔ)**
6 A: Are you still using that same old computer? **B:** No, I got a new one, actually.	**6** Are you (reduction **[əjə]**) -tha**t** same **(elision of t)** -ol**d** computer? **(elision of d)** -got a **(linking and reduction [gɒtə])** -new **ʷ** one **(linking vowel to vowel)**
7 A: I've got an interview for a job in Newcastle. **B:** Is that the one you mentioned before, at that computer firm? **A:** Yeah, that's right. I'm going up tomorrow.	**7** go**t‿a**n‿interview **(linking)** -fo**r‿a** job‿i**n (linking)** **-in N**ewcastle **(linking identical consonant)** -that the **(elision of t)** -mentione**d (elision of d)** -a**t** tha**t (elision of t)** -tha**t**'s **(elision of t)** -righ**t** (unreleased t). -goin**g‿u**p.
8 A: Can you remember when we first met? **B:** Oh, it must have been about 1992. **A:** Twenty years? I can't believe it.	**8** Can you (**reduction [kənjə]**) -firs**t** met **(elision of t)** -must have bee**n‿a**bout **(reduction [mʌtəbɪn])** -can't belie**ve‿i**t **(assimilation [kɑ:mbɪli:vɪt])**
9 A: Right, I'm off to the shops. **B:** Wait a minute - we can go together.	**9** I'**m‿o**ff **(linking)** -wait‿a **(linking)** -can go **(reduction and assimilation** [kə**ŋ**gəʊ])
10 A: Is that tea still all right? - **'**cause I can make some fresh if you like. B No, it's all right, thanks.	**10** tha**t t**ea **(linking identical consonant)** -stil**l‿a**ll **(linking)** -can make **(assimilation** [kə**m**meɪk])

	-some **(reduction** -fres**h‿**if **(linking)** -it'**s‿a**ll right **(t is inaudible)**

Appendix I

Listening and Phonetics Syllabi

1st Year Common Core / Listening & Speaking

(Total Annual Hours: 135 hours. Coefficient 2)

- **Expressing likes and dislikes**
- **Expressing memories of past events**
  - Relating jokes.
  - Past experience.
  - Past events...etc
- **Describing objects**
  - Size
  - Shape
  - Colour
  - Dimensions
- **Describing people**
  - Physical appearance and clothing.
  - Moral qualities.
  - Friendly / unfriendly and kinship relations.
  - Biographies etc…
- **Describing places**
  - Situation
  - Distance
  - Space
  - Topography
  - Landscape
  - Building, etc…
- **Describing motion and locomotion.**
  - Movement and speed direction, vehicles and means of transport
  - Journeys
  - Travels
  - Tours
  - Cruises, etc…
- **Decribing order**
  - Chronology
  - Logic
  - Phenomenon, etc…
- **Inquiring**
  - Formal – informal questions
  - About time
  - Place, space
  - Manner, etc…
- **Expressing arguments for and against various topics**

1st Year Common Core/ Phonetics

(Total Annual Hours: 45hours. Coefficient 1)

I - <u>The role of sounds in communication.</u>

- Different media available to man for the purpose of communication
- Speech and writing

II - <u>Phonetics and phonology</u>

III - <u>Speech mechanism</u>

IV - <u>Articulatory phonetics</u>

I - <u>Introduction to vowels</u>

- Relatively pure vowels
- Gliding vowels

II - <u>Articulation of consonants</u>

III - <u>Detailed study of consonants</u>

- Allophony
- Aspiration
- Velarisation

IV - <u>Consonant cluster</u>

- Initial
- Final

V - <u>Elements of prosody</u>

- Word stress

Appendix J

Students' Scores on Pre and Post Tests

Exercise one: Assimilation

Part one: Sound identification

Students' overall scores out of ten on the identification of sound assimilation

	Control group				Experimental group		
№	**Pretest**	**Post-test**	**Difference**	**№**	**Pretest**	**Post-test**	**Difference**
1	0	0	0	**55**	1	4	3
2	0	0	0	**56**	0	5	5
3	0	0	0	**57**	0	8	8
4	0	0	0	**58**	0	6	6
5	0	0	0	**59**	0	6	6
6	0	1	1	**60**	1	5	4
7	2	3	1	**61**	0	6	6
8	0	0	0	**62**	1	5	4
9	1	1	0	**63**	0	5	5
10	0	3	3	**64**	0	5	5
11	0	1	1	**65**	1	6	5
12	0	0	0	**66**	0	6	6
13	0	0	0	**67**	2	5	3
14	0	2	2	**68**	1	5	4
15	1	2	1	**69**	0	9	9
16	0	0	0	**70**	0	5	5
17	0	0	0	**71**	1	5	4
18	0	0	0	**72**	0	6	6
19	0	0	0	**73**	0	7	7
20	0	0	0	**74**	1	4	3
21	0	0	0	**75**	0	7	7
22	0	1	1	**76**	2	6	4
23	1	2	1	**77**	0	5	5
24	0	0	0	**78**	0	3	3
25	0	0	0	**79**	2	5	3
26	0	0	0	**80**	1	7	6

27	2	3	1	**81**	0	5	5
28	2	4	2	**82**	0	4	4
29	0	2	2	**83**	2	5	3
30	0	0	0	**84**	1	7	6
31	0	1	1	**85**	0	6	6
32	2	2	0	**86**	1	8	7
33	1	7	6	**87**	0	5	5
34	2	4	2	**88**	2	5	3
35	1	2	1	**89**	1	4	3
36	0	0	0	**90**	0	6	6
37	2	3	1	**91**	1	6	5
38	1	1	0	**92**	0	5	5
39	1	3	2	**93**	0	6	6
40	1	2	1	**94**	0	9	9
41	1	2	1	**95**	0	5	5
42	0	0	0	**96**	0	6	6
43	0	0	0	**97**	0	6	6
44	1	2	1	**98**	0	5	5
45	0	0	0	**99**	0	6	6
46	0	0	0	**100**	0	5	5
47	0	0	0	**101**	0	7	7
48	0	1	1	**102**	0	4	4
49	1	1	0	**103**	0	4	4
50	0	1	1	**104**	0	6	6
51	3	5	2	**105**	1	6	5
52	0	3	3	**106**	0	5	5
53	1	2	1	**107**	0	5	5
54	0	0	0	**108**	0	5	5

Part two: Word identification

Students' overall scores out of twenty on the perception of words affected by assimilation

	Control group				**Experimental group**		
№	**Pretest**	**Post-test**	**Difference**	**№**	**Pretest**	**Post-test**	**Difference**
1	3	3	0	**55**	2	8	6
2	2	2	0	**56**	4	9	5

3	4	5	1	**57**	5	15	10
4	5	6	1	**58**	5	13	8
5	3	2	-1	**59**	5	14	9
6	6	8	2	**60**	5	9	4
7	5	8	3	**61**	7	13	6
8	11	12	1	**62**	6	11	5
9	2	3	1	**63**	4	11	7
10	4	6	2	**64**	2	9	7
11	6	7	1	**65**	9	16	7
12	8	14	6	**66**	4	11	7
13	3	8	5	**67**	5	11	6
14	4	5	1	**68**	5	13	8
15	6	8	2	**69**	7	15	8
16	7	9	2	**70**	9	12	3
17	6	6	0	**71**	6	12	6
18	5	10	5	**72**	7	11	4
19	5	5	0	**73**	12	14	2
20	7	6	-1	**74**	4	10	6
21	4	7	3	**75**	6	12	6
22	6	6	0	**76**	4	11	7
23	14	12	-2	**77**	8	16	8
24	9	10	1	**78**	2	11	9
25	9	12	3	**79**	10	12	2
26	3	5	2	**80**	5	14	9
27	2	5	3	**81**	4	8	4
28	8	10	2	**82**	4	15	11
29	6	7	1	**83**	7	10	3
30	2	7	5	**84**	3	12	9
31	11	16	5	**85**	8	12	4
32	6	5	-1	**86**	8	16	8
33	9	14	5	**87**	3	13	10
34	12	14	2	**88**	2	11	9
35	8	10	2	**89**	7	10	3
36	7	11	4	**90**	2	13	11
37	7	13	6	**91**	3	7	4
38	5	9	4	**92**	4	11	7

39	3	9	6	**93**	6	13	7
40	5	12	7	**94**	9	17	8
41	5	6	1	**95**	2	7	5
42	8	12	4	**96**	10	17	7
43	3	5	2	**97**	11	17	6
44	4	8	4	**98**	7	9	2
45	2	4	2	**99**	4	13	9
46	4	10	6	**100**	6	14	8
47	4	8	4	**101**	7	14	7
48	3	4	1	**102**	3	10	7
49	4	5	1	**103**	11	17	6
50	6	5	-1	**104**	7	12	5
51	7	6	-1	**105**	6	7	1
52	6	7	1	**106**	6	12	6
53	6	8	2	**107**	7	13	6
54	6	7	1	**108**	3	13	10

Exercise two: Linking

Students' overall scores out of forty on the perception of linked words

	Control group				**Experimental group**		
№	**Pretest**	**Post-test**	**Difference**	**№**	**Pretest**	**Post-test**	**Difference**
1	5	9	4	**55**	3	11	8
2	9	7	-2	**56**	9	13	4
3	9	9	0	**57**	8	29	21
4	5	11	6	**58**	8	14	6
5	1	10	9	**59**	5	28	23
6	9	13	4	**60**	8	21	13
7	4	7	3	**61**	7	18	11
8	10	20	10	**62**	6	22	16
9	6	8	2	**63**	6	17	11
10	7	13	6	**64**	6	16	10
11	7	5	-2	**65**	15	33	18
12	17	17	0	**66**	9	13	4
13	5	13	8	**67**	7	24	17
14	4	13	9	**68**	8	14	6

15	5	11	6	**69**	10	27	17
16	5	14	9	**70**	9	23	14
17	6	8	2	**71**	8	19	11
18	9	14	5	**72**	8	20	12
19	4	7	3	**73**	8	20	12
20	8	13	5	**74**	8	15	7
21	10	10	0	**75**	7	14	7
22	8	15	7	**76**	8	19	11
23	14	13	-1	**77**	8	30	22
24	11	17	6	**78**	2	11	9
25	9	16	7	**79**	10	19	6
26	5	6	1	**80**	11	17	6
27	3	14	11	**81**	6	18	12
28	12	22	10	**82**	7	14	7
29	8	18	10	**83**	6	19	13
30	11	16	5	**84**	8	16	8
31	13	13	0	**85**	6	16	10
32	6	8	2	**86**	23	34	11
33	14	29	15	**87**	10	14	4
34	21	20	-1	**88**	6	13	7
35	13	15	2	**89**	7	14	7
36	15	11	-4	**90**	5	13	8
37	6	13	7	**91**	7	12	5
38	9	15	6	**92**	6	11	5
39	4	7	3	**93**	7	14	7
40	13	16	3	**94**	14	24	10
41	7	10	3	**95**	5	12	7
42	11	20	9	**96**	14	24	10
43	3	6	3	**97**	15	21	6
44	4	10	6	**98**	5	11	6
45	6	15	9	**99**	5	13	8
46	6	10	4	**100**	8	12	4
47	4	15	11	**101**	9	21	12
48	5	10	5	**102**	8	16	8
49	7	14	7	**103**	12	23	11
50	7	17	10	**104**	10	20	10

51	15	19	4	**105**	7	10	3
52	8	16	8	**106**	8	15	7
53	4	12	8	**107**	6	14	8
54	7	6	-1	**108**	7	14	7

Exercise three: Elision

Students' overall scores out of twenty on the perception of words which underwent elision

	Control group				**Experimental Group**		
№	**Pretest**	**Post-test**	**Difference**	**№**	**Pretest**	**Post-test**	**Difference**
1	1	3	2	**55**	2	10	8
2	3	3	0	**56**	5	13	8
3	3	4	1	**57**	4	17	13
4	5	9	4	**58**	7	11	4
5	3	3	0	**59**	7	17	10
6	7	8	1	**60**	11	15	4
7	4	6	2	**61**	8	14	6
8	9	11	2	**62**	7	15	8
9	2	2	0	**63**	4	14	10
10	3	3	0	**64**	7	11	4
11	7	7	0	**65**	8	16	8
12	13	13	0	**66**	5	9	4
13	5	6	1	**67**	7	14	7
14	2	5	3	**68**	8	17	9
15	4	6	2	**69**	7	18	11
16	7	10	3	**70**	5	16	11
17	9	10	1	**71**	7	14	7
18	5	8	3	**72**	6	12	6
19	4	6	2	**73**	8	15	7
20	5	6	1	**74**	4	13	9
21	4	8	4	**75**	7	17	10
22	2	2	0	**76**	5	13	8
23	11	12	1	**77**	6	17	11
24	8	9	1	**78**	4	9	5
25	12	13	1	**79**	5	10	5
26	3	7	4	**80**	8	11	3
27	4	4	0	**81**	4	12	8

28	13	14	1	**82**	7	14	7
29	5	11	6	**83**	7	14	7
30	6	8	2	**84**	3	12	9
31	6	8	2	**85**	8	14	6
32	5	5	0	**86**	10	17	7
33	14	14	0	**87**	2	14	12
34	8	12	4	**88**	3	8	5
35	9	10	1	**89**	4	8	4
36	9	14	5	**90**	4	11	7
37	5	9	4	**91**	5	10	5
38	6	9	3	**92**	3	8	5
39	4	7	3	**93**	7	12	5
40	4	9	5	**94**	6	13	7
41	3	8	5	**95**	2	8	6
42	6	6	0	**96**	13	14	1
43	2	5	3	**97**	10	17	7
44	2	7	5	**98**	2	13	11
45	4	3	-1	**99**	2	13	11
46	5	6	1	**100**	4	14	10
47	9	12	3	**101**	8	14	6
48	5	6	1	**102**	4	8	4
49	2	7	5	**103**	11	12	1
50	5	7	2	**104**	6	14	8
51	7	8	1	**105**	3	11	8
52	3	9	6	**106**	7	14	7
53	2	6	4	**107**	5	7	2
54	5	11	6	**108**	3	14	11

Exercise four: Function words

Students' overall scores out of twenty-six on the perception of reduced forms of function words

	Control group				Experimental group		
№	**Pretest**	**Post-test**	**Difference**	**№**	**Pretest**	**Post-test**	**Difference**
1	0	1	1	**55**	1	8	7
2	0	0	0	**56**	3	6	3
3	3	3	0	**57**	3	18	15
4	2	4	2	**58**	3	12	9
5	0	2	2	**59**	5	19	14
6	5	6	1	**60**	11	15	4
7	3	2	-1	**61**	5	15	10
8	10	13	3	**62**	8	12	4
9	2	2	0	**63**	4	10	6
10	4	4	0	**64**	2	5	3
11	2	7	5	**65**	8	17	9
12	13	16	3	**66**	2	7	5
13	2	3	1	**67**	6	11	5
14	4	6	2	**68**	4	9	5
15	3	3	0	**69**	4	15	11
16	6	7	1	**70**	10	11	1
17	4	2	-2	**71**	4	8	4
18	3	10	7	**72**	4	9	5
19	3	4	1	**73**	5	18	13
20	2	6	4	**74**	2	5	3
21	3	10	7	**75**	2	12	10
22	4	10	6	**76**	2	9	7
23	7	12	5	**77**	5	13	8
24	8	12	4	**78**	2	10	8
25	9	12	3	**79**	4	9	5
26	0	4	4	**80**	3	13	10
27	3	3	0	**81**	1	10	9
28	6	12	6	**82**	3	12	9
29	5	10	5	**83**	1	13	12
30	3	5	2	**84**	1	9	8
31	9	11	2	**85**	6	10	4

32	0	2	2	**86**	7	20	13
33	6	14	8	**87**	2	8	6
34	14	17	3	**88**	1	9	8
35	4	8	4	**89**	3	8	5
36	4	8	4	**90**	2	11	9
37	4	7	3	**91**	3	6	3
38	8	10	2	**92**	2	8	6
39	2	2	0	**93**	4	11	7
40	6	10	4	**94**	11	17	6
41	3	2	-1	**95**	3	8	5
42	7	8	1	**96**	16	20	4
43	0	0	0	**97**	9	12	3
44	3	4	1	**98**	3	10	7
45	2	3	1	**99**	1	9	8
46	2	2	0	**100**	2	10	8
47	8	8	0	**101**	9	14	5
48	2	2	0	**102**	3	14	11
49	1	4	3	**103**	13	15	2
50	1	3	2	**104**	4	15	11
51	3	6	3	**105**	1	10	9
52	2	3	1	**106**	6	10	4
53	2	8	6	**107**	2	12	10
54	3	5	2	**108**	1	12	11

Exercise five: Listening Comprehension

Students' overall scores out of forty on listening comprehension

	Control group				**Experimental group**		
№	**Pretest**	**Post-test**	**Difference**	**№**	**Pretest**	**Post-test**	**Difference**
1	6	15.5	9.5	**55**	9	16.5	7.5
2	6.5	6.5	0	**56**	13	22.5	9.5
3	9	14.5	5.5	**57**	12	22	10
4	14	13.5	-0.5	**58**	11	28	17
5	4.5	13.5	9	**59**	12	21.5	9.5
6	18.5	23.5	5	**60**	20.5	31	10.5
7	8.5	12	3.5	**61**	21	31	10

8	20	26	6	**62**	12.5	25	12.5
9	9	8	-1	**63**	13	24	11
10	7.5	14.5	7	**64**	12.5	19	6.5
11	5	16.5	11.5	**65**	19.5	30.5	11
12	11.5	16	4.5	**66**	9	19.5	10.5
13	8.5	14	5.5	**67**	12.5	20	7.5
14	12.5	20	7.5	**68**	11.5	25.5	14
15	8	14.5	6.5	**69**	21.5	28	6.5
16	15.5	24	8.5	**70**	11.5	22	10.5
17	11	15,5	4.5	**71**	14	26	12
18	12.5	20	7.5	**72**	12	25	13
19	10.5	13.5	3	**73**	19	31.5	12.5
20	14.5	20.5	6	**74**	15.5	23	7.5
21	15	21	6	**75**	15.5	25.5	10
22	15	17.5	2.5	**76**	14.5	26	11.5
23	17.5	21	3.5	**77**	13	23.5	10.5
24	19	20	1	**78**	8	20	12
25	17.5	29	11.5	**79**	12	23	11
26	10.5	11	0.5	**80**	15	25.5	10.5
27	9	16	7	**81**	7.5	16.5	9
28	21.5	26.5	5	**82**	8.5	20	11.5
29	16.5	21.5	5	**83**	16	25	9
30	14.5	14.5	0	**84**	14	27	13
31	18.5	20	1.5	**85**	10.5	25.5	15
32	9.5	12.5	3	**86**	17.5	28.5	11
33	19	19	0	**87**	8.5	20	11.5
34	19.5	27	7.5	**88**	10	19	9
35	12	18	6	**89**	12.5	23	10.5
36	18	20.5	2.5	**90**	9	23.5	14.5
37	11.5	22	10.5	**91**	13	24.5	11.5
38	18.5	24,5	6	**92**	14	21.5	7.5
39	12	17	5	**93**	11.5	21	9.5
40	12.5	23.5	11	**94**	19.5	30	10.5
41	15.5	16	0.5	**95**	10.5	21.5	11
42	22.5	21.5	-1	**96**	20.5	305	10
43	8	12.5	4.5	**97**	19.5	30	10.5

44	14	19	5	**98**	6.5	15.5	9
45	5.5	8.5	3	**99**	10.5	24	13.5
46	12	18.5	6.5	**100**	11	28	17
47	17	20	3	**101**	19	30	11
48	12.5	12.5	0	**102**	11.5	20	8.5
49	8	15.5	7.5	**103**	15	28	13
50	13	14.5	1.5	**104**	12	20.5	8.5
51	11	11	0	**105**	8.5	23.5	15
52	11	18	7	**106**	17	26.5	9.5
53	12.5	18.5	6	**107**	11.5	21	9.5
54	13	18	5	**108**	12	23.5	11.5

الملخص

تحسين الدقة الإدراكية وفهم الاستماع لدى طلاب اللغة الإنجليزية كلغة أجنبية في الجزائر من خلال التعليم الصريح لعمليات الكلام المتصل:
دراسة حالة لطلاب السنة الأولى في المدرسة العليا للأساتذة ببوزريعة

تحتوي اللغة الانجليزية المنطوقة بشكل طبيعي على بعض الميزات التي تعيق الفهم الاستماعي لطلاب اللغة الانجليزية كلغة أجنبية، و المعروفة بعمليات النطق المتصلة، مثل الإدغام، الارتباط اللفظي ، الحذف اللفظي على حدود الكلمات و الصيغ المختصرة للكلمات الوظيفية. ولهذا السبب يجد الطلبة صعوبة في فهم المتحدثين الأصليين للغة الانجليزية، حتى عندما يستخدمون كلمات مألوفة. التعديلات التي يتم إجراءها على حدود الكلمات أثناء الكلام المتصل يمكن أن تجعلها صعبة الفهم. لذلك تبحث هذه الدراسة في مدى فعالية تدريس عمليات الكلام المتصلة، من حيث الإدراك و الفهم الاستماعي، و رفع وعي الطلبة الجزائريين في السنة الأولى بالمدرسة العليا للأساتذة ببوزريعة. استخدمت الدراسة تصميم شبه تجريبي الذي يشمل مجموعتين: مجموعة ضابطة و مجموعة تجريبية، تتكون كل منهما من 54 مشاركا (108 طالب). و قد أجريت الدراسة على مدى ستة أشهر. تم استخدام أداتين لجمع البيانات: الاختبار القبلي و الاختبار ألبعدي واستبيانين. تم تطبيق الاستبيان الأول بعد التجربة على المجموعة التجريبية للتعرف على اتجاهاتهم و ردود أفعالهم تجاه تعليم عمليات الكلام المتصل. و من ناحية أخرى، تم تطبيق الاستبيان الثاني على أساتذة الاستماع للتعرف على اتجاهاتهم و آرائهم و خبراتهم فيما يتعلق بتدريس الاستماع بشكل عام و تعليم عمليات الكلام المتصلة بشكل خاص. تشير النتائج إلى أن التدريب على عمليات الكلام المتصل له تأثير ايجابي على دقة الإدراك لدى الطلاب واستيعابهم السمعي. يساعد هذا النوع من التدريب الطلاب على فهم اللغة المنطوقة و إدراكها بشكل أفضل، مما يعني انه يمكن ان يكون أسلوبا مفيدا لمتعلمي اللغة في تحسين مهارات الاستماع لديهم. علاوة على ذلك، كما أن النتائج أظهرت أهمية استخدام الكلام الطبيعي الحقيقي، واستخدام الأساليب و المواد التي تناسب احتياجات الطلاب و تفضيلاتهم الفردية، وإدراج تعليم النطق في تحسين مهارات الاستماع. سلط وجهات نظر المعلمين أيضا الضوء على التحديات التي يواجهونها في تدريس الاستماع، مثل التناقض بين التهجئة و النطق ونقص المواد المناسبة فضلا عن الحاجة إلى التطوير المهني المستمر و التعاون لتحسين أساليب التدريس و المناهج الدراسية للاستماع و التحدث. وقد خلصت الدراسة بتبيان تداعيات تدريس عمليات الكلام المتصل و تؤكد على أهمية دمج تقنيات التدريس لتعزيز مهارات الاستماع لدى الطلاب

الكلمات المفتاحية:

الدقة الإدراكية؛ الفهم السمعي؛ الإدغام؛ الربط؛ الحذف؛ اختزال الكلمات الوظيفية؛ اللغة الإنجليزية كلغة أجنبية في التعليم العالي الجزائري