DYNAMIC ASSESSMENT OF LISTENING COMPREHENSION IN SECOND LANGUAGE LEARNING

A Dissertation in

French

by

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This dissertation concentrates on theoretical and methodological issues at the intersection of second language acquisition, language pedagogy and sociocultural theory (SCT), initially proposed by the Russian psychologist Vygotsky. More specifically, the dissertation seeks to redress the current lack of diagnostic assessment in language instruction and the development of listening proficiency.

The dissertation extends traditional understanding of listening assessment in foreign language contexts and applies dynamic assessment (DA) to the development of learners’ listening ability. DA is grounded in the Vygotskyan concept of the Zone of Proximal Development (ZPD) and prescribes mediated teacher-learner dialog during the assessment procedure. Theoretically developed and experimentally tested worldwide since the 1950s, DA has proven to be a valuable diagnostic tool primarily in psychological research and, as a later development, in educational research focused on teaching/learning different school subjects (e.g. mathematics, physics). However, language educators have only recently begun to examine the pedagogical applications of DA (e.g. Lantolf & Poehner 2004, Poehner 2005; Antón, 2003, 2009; Ableeva, 2008). This initial L2 research argues that assessment-with-mediation brings assessment and instruction together into an organic unity whereby learning is the result of mediation, which is then internalized and becomes accessible to be deployed later in other contexts.

The dissertation investigates the effects of dynamic assessment on improving listening comprehension of intermediate university students learning French as a foreign language and compares the results to a traditional test of listening comprehension. The
study conducted as part of this dissertation demonstrates that DA, due to its reliance on mediated dialogue, illuminates the sources of poor performance that are usually hidden during traditional assessments, which are non-dynamic in nature. DA is able to inform the instructional process regarding specific areas where learners need improvement and in so doing allows for appropriate intervention to help learners overcome these problems. The results of the study indicate that, through interactions in the ZPD, DA permits to establish not only the actual level of learners’ listening ability but also to diagnose/assess the potential level of their listening development, while at the same time promoting this development.
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Chapter 1

Introduction

1.1 Statement of purpose

This dissertation lies in an interdisciplinary field of applied linguistics that includes second language acquisition, language pedagogy and sociocultural theory of cognitive development, as proposed by Russian psychologist and educator Lev Semenovich Vygotsky. More specifically, the dissertation explores the pedagogical application of Dynamic Assessment, a testing approach nurtured by Vygotsky’s theory, to second language listening assessment and instruction.

Despite the fact that the development of listening proficiency has been generally recognized as a crucial component of foreign language learning and teaching, many scholars contend that listening comprehension is often treated as a Cinderella skill of L2 instruction (e.g. Nunan, 1997; Vandergrift, 1997) and that research in this area is “still in its infancy” (Omaggio-Hadley, 2000:184). Furthermore, a lack of L2 listening studies has been repeatedly emphasized in many reviews of scholarship on the subject over the years (e.g. Ur, 1984; Rubin, 1994; Vandergrift, 2007).

The studies that have been conducted to date focus mainly on product-oriented investigations of listening comprehension that typically measure listening ability using quantitative research methods (e.g. Rubin, 1994; Rost, 2002; Vandergrift, 1998, 2007; Field, 2008). In this respect, Vandergrift (2007) remarks that quantitative approaches are
able to “tell us something about the product, i.e. the level of listening success, [but they] tell us nothing about the process; i.e. how listeners arrive at the right answer or why comprehension breaks down” (p. 192). For this reason, Vandergrift claims that there is a pressing need for studies exploring listening processes through qualitative methods. As Vandergrift (2007) cogently puts it: “[...] listening processes are complex and they interact with different knowledge sources, human characteristics and other contextual factors in complex ways. These processes and their interactions need to be explored using in-depth qualitative methods to better understand how L2 listeners attain successful comprehension” (p. 206).

At the level of assessment, there has been published a relatively small number of studies that consider the assessment of listening ability (e.g. Ur, 1984, Buck, 2003; Flowerdew & Miller, 2005; Field, 2008). Perhaps not surprisingly, Alderson and Bachman, the editors of the Cambridge Language Assessment Series, point out that “the assessment of listening abilities is one of the least understood, least developed and yet one of the most important areas of language testing and assessment” (Series Editors’ Preface in Buck, 2003:x). While discussing the purposes and the types of L2 listening tests (e.g. achievement, placement tests), Buck (2003) as well as Alderson (2005) articulate the acute need for the creation of new diagnostic listening assessments that will identify specific areas where learners need improvement, and in so doing will better inform the instructional process regarding learners’ listening abilities. For example, Buck (2003) explains the existing lack of diagnostic listening assessments as follows: “there are currently few diagnostic tests of listening, largely because we still do not fully
understand what the important sub-skills of listening are; nor are we sure what information educators need to teach listening better‖ (p. 97).

Thus, this dissertation intends to address the aforementioned concerns articulated in recent L2 research by applying Dynamic Assessment (DA henceforth) to listening instruction. That is, the dissertation first seeks to investigate the effects of DA-based instruction on the development of listening proficiency. In addition, the dissertation endeavors to partially redress the existing gaps in two areas: diagnostic listening assessment and qualitative listening research that scrutinizes the process of listening comprehension. Subsequent chapters analyze in detail the theoretical principles and practical implementations of DA, but for now what is noteworthy to mention is that due to its reliance on mediated dialogue during the testing procedure, DA permits not only the diagnosis of specific sources of difficulty but also provides insights into the process of listening and promotes listening ability by tracking its development through microgenetic analysis, a specific qualitative method, proposed by sociocultural theory (SCT henceforth).

The chapter roadmap is as follows. Section 1.2 provides the rationale for utilizing DA-based approach to listening instruction and assessment and presents the research questions. Section 1.3 introduces the theoretical framework and briefly overviews methodological principles of SCT and DA. Finally, section 1.4 outlines the organization of the dissertation.
1.2 Overview of the study

This dissertation reports on a longitudinal pedagogical intervention that applied DA, a key testing SCT concept, to listening assessment and instruction. The SCT perspective adapted here allowed examination of L2 listening development from a new angle, i.e. the principles of microgenetic analysis proposed by Vygotsky, rarely attempted to date in L2 listening research.

1.2.1 Research goal and research questions

The primary goal of the dissertation is to investigate the effects of DA on diagnosing and promoting the development of listening comprehension in a second language. This goal is realized through the following research questions:

1) To what extent can a DA procedure enhance the development of listening ability among L2 university intermediate learners?
2) What forms of mediation during DA-based pedagogical intervention best nurture the development of listening abilities of L2 intermediate learners?
3) What are the responsive moves to mediation exhibited by the learners during the DA-based pedagogical intervention?
4) How effectively can DA diagnose the source of learners’ problem areas related to listening comprehension?

The first research question is addressed quantitatively in Chapter 6 and qualitatively in Chapter 7. The second and the third questions are addressed in Chapter 7 and the fourth question in Chapter 8 through the application of qualitative research.
methods. In order to track the developmental trajectory of learners’ listening ability, all research questions are investigated by means of microgenetic analysis (see 1.3 and 5.4.1).

1.2.2 Assessing L2 listening for development

The study was carried out over a two-month period and involved seven intermediate university L2 learners of French enrolled in a French Oral Communication and Reading Comprehension course at a major public North American university. They were asked to listen and recall (in English) eight increasingly complex authentic French spoken texts in which native speakers addressed various topics relating to French and American culinary habits. Text comprehension was determined by counting the total number of idea units recalled as compared to the total number contained in the original text. Following the independent recall, the students interacted with the mediator, who helped them whenever they encountered problems recalling specific portions of the text. This help, in accordance with the principles of DA was at first implicit but, depending on learner responsiveness, became increasingly explicit or completely withdrawn. In this way, DA brought to the surface the abilities that were in the process of developing and at the same time identified those areas where learners had problems (e.g., phonology, lexicon, grammar, cultural knowledge). Using a microgenetic approach to data analysis, the study revealed that breakdowns in text comprehension exhibited by the learners were related not only to lexis but also to grammatical and phonological problems, which turned out to be more salient than what previous research on aural comprehension has argued.
1.3 Dynamic Assessment: theoretical framework

Although most scholars acknowledge that DA was originally inspired by Vyotsky’s writings, in particular his thinking on the Zone of Proximal Development (e.g. Stenberg & Grigorenko, 2002; Feuerstein, Rand, Jensen, Kaniel & Tzuriel, 1987), contemporary research within the DA framework has also been influenced by Structural Cognitive Modifiability theory proposed by Reuven Feuerstein, whose work will be examined in Chapter 4. Given that this dissertation is conceptualized within the SCT framework, the following sections are exclusively confined to DA grounded in Vygotsky’s theory.

1.3.1 SCT-based Dynamic Assessment: theoretical background

Examination of the relationship between instruction and cognitive development is a significant aspect of Vygotsky’s legacy. Contrary to the Piagetian view in which instruction is predicated on the developmental readiness of individuals, Vygotsky and his colleagues were striving to understand how instruction influences development as well as to what extent and what kind of instruction might promote development.

Vygotsky regards development as an evolutionary as well as revolutionary process which is not linear and involves both progression and regression. He argued that even if development might contain some regression, it still contributes to general movement forward (Vygotsky, 1978; 1997a), i.e. development is a process that is always pushing individuals forward even if at times it needs to step backward (Lantolf, personal communication, spring 2009). In Vygotsky’s view, the process of human mental
functioning and its development can be best captured through the genetic method, a research approach in which history (i.e., change over time) plays a central role in development (Vygotsky, 1986, 1987; Lantolf, 2000; see also discussion in Chapter 5). Vygotsky distinguishes four genetic domains: phylogenetic (the development over the course of human evolution), sociocultural (the development of human cultures), ontogenetic (the development of an individual over a relatively long span of time, e.g. 10 years) and microgenetic (the development of a specific process of an individual over a short period of time, e.g. 2-3- months). To observe the process of listening development, this study implements an analysis anchored in the microgenetic domain. With regard to instruction, Vygotsky understands it primarily as the major source of cognitive development (Vygotsky 1986) and in fact argues for the dialectical unity of the two processes in which instruction lays down the path for development to follow while at the same time development opens up possibilities for further instruction (Vygotsky, 1997a).

While formulating his ideas concerning the relationship between instruction and development, Vygotsky (1987) advanced the concept of the ZPD in juxtaposition to the zone of actual development. It should be emphasized here that the concept of the ZPD was introduced by Vygotsky as a diagnostic principle, enabling researchers and educators to gain more insights into learners’ potential level of development as well as into the kinds of problems that inhibit learners’ cognitive growth.

According to Vygotsky, the actual level of development can be identified on the basis of learners’ independent performance whereas the ZPD reflects what learners’ can do under guidance of teachers and comprises those cognitive functions that are not yet fully developed but are in the process of maturing. This view was motivated by
Vygotsky’s belief that instruction and assessment should be adjusted not only to the actual zone of development but also to the learners’ ZPD, i.e. when used together, they will be able to provide a more complete picture of learners’ development. Additionally, Vygotsky suggested evaluating the ZPD by engaging learners in collaboration during the assessment procedure and by using leading questions, prompts or hints offered gradually, and withheld when appropriate.

Vygotsky claimed that instruction and assessment are only good when they promote development and stimulate a range of functions that are ripening within the ZPD (Vygotsky, 1987). Vygotsky’s understanding of instruction and development of cognitive abilities served as the basis for creation of educational approaches that seek to target the learners’ ZPD. Since the 1950s Vygotsky’s students and colleagues, those who followed in his footsteps, advanced the idea of developmental education which included such SCT-based approaches to school instruction as concept-based teaching (Gal’perin, El’konin, Davydov) and dynamic assessment, termed teaching-learning experiment (TLE) in Russia (e.g. Leontiev, Luria & Smirnov, 1968; Talyzina, 1986).

Since that time, a substantial body of psychological and educational DA studies has emerged in Russia and in various parts of the world. The studies demonstrate that SCT-based DA has proven to be a valuable assessment tool allowing researchers to diagnose learning problems while teaching/learning different school subjects (e.g. mathematics, physics, Russian as L1). Second language researchers and educators,  

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1 Vygotsky argued that theoretical and spontaneous concepts form a dialectical unity and play an important role in the formation of personality. For this reason, the distinction between theoretical (or scientific) and spontaneous (related to everyday life) concepts is at the heart of SCT educational theory. Vygotsky and his followers regarded instruction as a process organized around the concepts that underlie the world (no matter what the subject is). In their view, conceptual understanding of a subject enhances learners’ knowledge and promotes learners’ intellectual development.
however, have only recently begun to examine the pedagogical applications of DA (e.g. Kozulin & Garb, 2002; Lantolf & Poehner 2004, Poehner 2005, Antón, 2009).

1.3.2 SCT-based Dynamic Assessment and L2 pedagogy

DA is a relatively new approach to L2 assessment that has been introduced to L2 research and educational community by Lantolf and Poehner (2004) and Poehner and Lantolf (2005). Since 2004, there has been growing support for the use of DA in language pedagogy (Antón, 2009; Lantolf & Poehner, 2004; Poehner & Lantolf, 2005; Poehner, 2005, 2008, Ableeva, 2007; 2008). The authors of L2 publications on DA argue in favor of this qualitative procedure and provide examples of how students benefit from DA-based language instruction. On the basis of this initial L2 DA research, this study adopts the following definition of DA:

Dynamic assessment integrates assessment and instruction into a seamless, unified activity aimed at promoting learner development through appropriate forms of mediation that are sensitive to the individual’s (or in some cases a group’s) current abilities. In essence, DA is a procedure for simultaneously assessing and promoting development that takes account of the individual’s (or group’s) zone of proximal development [and his/her responsiveness to mediation]. (Lantolf & Poehner, 2004: 50)

In other words, contrary to traditional assessment that focuses on already matured abilities, “DA promotes functions that are maturing” in the ZPD and “foregrounds future development” (Lantolf & Poehner, 2004: 54). These manifestations of DA result from its underpinning in such foundational SCT concepts as the zone of proximal development, mediation (or collaboration, in Vygotsky’s terms) and learners’ responsiveness to mediation (see 4.3 and 7.2). That is, SCT-based DA sees mediation as a pedagogical
instrument that “is provided during the assessment procedure and is intended to bring to light underlying problems and help learners overcome them” (Lantolf & Poehner, 2008:273).

Following Vygotsky, L2 research views DA as a procedure that unifies assessment and instruction (e.g. Lantolf & Poehner 2004, 2008). It is argued that “assessment and instruction are inseparable components of the same dialectical activity…” and that “assessment and instruction become as tightly conjoined as two sides of the same coin – and there are no one-sided coins” (Lantolf & Poehner, 2008:274). This point of view is in sharp contrast to traditional testing procedures that dichotomize instruction and assessment and conceive assessment in a more conventional, standardized way (see Sternberg & Grigorenko, 2002; Poehner, 2005; Haywood & Lidz, 2007).

According to Lantolf and Poehner (2004), DA comprises Interventionist and Interactionist types that usually involve three stages: pre-test → mediation → post-test. The most important proponents of these two orientations are M. Budoff and R. Feuerstein respectively (see Chapter 4 for a detailed analysis of Budoff’s and Feuerstein’s approaches to DA). The interventionist type of DA includes intervention from the examiner during the test procedure itself but it is a more formal and standardized approach. During interventionist DA the examinees are given instruction item by item and if they cannot solve the item correctly, they are given pre-fabricated hints.

Interactionist DA entails mediation emerging from interaction between examiner and examinee. During interactionist DA leading questions, hints or prompts are not planned in advance; instead, they emerge from mediated dialogue (or collaborative interaction) between the examiner and the examinee in which the examiner reacts to the examinee’s
needs and constantly re-calibrates his/her mediation. It is important to note here that within DA the examiner-examinee relationship is based on the idea of teaching and helping, e.g. learners are allowed to pose questions and receive immediate feedback. Within both formats of DA, the instruction may be given in individual or group settings (Poehner & Lantolf, 2005; Poehner 2005; Sternberg & Grigorenko 2002).

Although at present DA is attracting increased attention among applied linguists and L2 educators, empirical research on DA-based instruction in second language acquisition remains scarce (see Poehner, 2005; Ableeva, 2008; Antón, 2009, Lantolf & Poehner, in press). For example, Ableeva (2008) reports on a pilot study exploring the effects of DA on the listening comprehension of intermediate L2 French university students and compares the results to a traditional test of listening comprehension. The students participating in her study listened to an authentic French language radio commercial for a Belgium restaurant chain and were asked to recall its content. Ableeva documents that the use of mediation during the DA-based procedure enabled her to identify the specific source of the difficulty which was not apparent during a traditional assessment. Moreover, the traditional assessment underestimated the potential development of the learners’ listening ability because several of them were able to correctly interpret the commercial with minimal mediation from the instructor (e.g., a leading question), thus illustrating that they understood more of the aural text than could be brought out in the assessment during which students recalled the text independently. Thus, the six DA-based case studies examined in Ableeva (2008) suggest that DA is a valuable qualitative tool which allows instructors to diagnose the actual level of students’ listening abilities, as well as those abilities “that are now in the state of coming into
being, that are only ripening, or only developing” (Vygotsky, 1956: 447-8). The promising results from this initial study served to motivate the present investigation.

1.4 Structure of the dissertation

This dissertation contains nine chapters, including the introductory chapter. Chapter 2 begins with a review of the relevant scholarly literature on the complex problem of L2 text comprehension, with a special focus on studies informed by SCT. It then describes the text comprehension models proposed by L2 reading and listening research, including a chronological overview of assessment practices used in L2 listening instruction over the last 50 years. This is followed by an analysis of recent exploratory work that has articulated concerns regarding the need for L2 diagnostic assessment, including listening diagnostic assessment, and the current lack of listening research examining the process of listening comprehension.

Chapter 3 is devoted to ZPD-based psychological research that has been carried out in the Russian academic context since the introduction of the ZPD concept in the early 1930s. The chapter begins with an overview of the concept and the ZPD assessment as presented in L.S.Vygotsky’s works and the work of A.N. Leont’ev, Luria and Smirnov, Vygotsky’s colleagues and followers. The rest of the chapter focuses on studies conducted in Russia that applied a DA-like diagnostic procedure known as the teaching/learning experiment to assess the ZPD of school children and adults.

Chapter 4 reviews literature pertinent to DA and introduces various DA frameworks that were developed outside Russia, i.e. Israel, Germany and the United
States. The chapter offers an overview of the leading DA approaches and includes a comparative analysis of TLE and DA frameworks as well as DA and non-dynamic or traditional forms of assessment. Given the fact that this study evolves within the SCT framework, the chapter introduces the definition of DA proposed by Lantolf and Poehner (2004), which accounts for such major SCT concepts as the ZPD, mediation and development. These major concepts are analyzed in relation to the initial DA studies conducted in L2 contexts.

Chapter 5 describes the research design and methodology. First, the chapter introduces the participants of the study. Second, the chapter provides a rationale for the use of quantitative and qualitative approaches to data analyses and reviews literature on the major methodology used in the study, i.e. microgenetic analysis. Third, the chapter describes the design of the pedagogical experiment and the data collection instruments, considers the purpose of the assessments implemented in the study. Finally, the chapter provides an overview of the enrichment program designed to promote learners’ listening ability through the formation of a conceptual understanding of features that characterize authentic spoken French.

Chapter 6 presents data in aggregation and introduces Vygotsky’s notion of progression and regression through which the data are analyzed. The aggregate data analysis is based on learners’ independent listening performance and is approached by means of descriptive and inferential statistical measures. Chapter 7 focuses on two crucial SCT concepts: mediation and the ZPD, and their role in the language developmental process. First, the chapter outlines mediational strategies accountable for L2 listening ability that emerged during the mediator-learner interactions while working within the
learners’ ZPDs. It then examines learner responsivity to mediation that is analyzed qualitatively through Vygotsky’s notion of progression and regression. Chapter 8 reports on the diagnostic effects of DA as well as the process of listening comprehension observed through the microgenetic, i.e. qualitative, analysis and investigated through the DA-based methodology, i.e. mediational dialogue.

Chapter 9 concludes by summarizing the major findings of the dissertation and by indicating limitations of the present study. In addition, contributions of the study to SCT and L2 research are presented and implications for the further research exploring the effects of DA on L2 acquisition study are suggested.
Chapter 2

Second Language Listening: Assessing Text Comprehension

2.1. Introduction

This chapter addresses a broad range of issues concerned with problems of L2 text comprehension and L2 listening assessment practices. It should be first noted that text comprehension is an interdisciplinary subject of academic inquiry and has long been simultaneously investigated by many disciplines (e.g. psychology, applied linguistics, language pedagogy). However, despite the significant interdisciplinary attention to this complex process and the efforts of researchers from various disciplines, our knowledge about the decoding of spoken and written messages is still imperfect (e.g. Luria, 2002, Leontiev, 2003; Appel & Lantolf, 1994; Swaffar, Arens & Byrnes, 1991; Alderson, 2005; Kern, 2000).

In language pedagogy, text comprehension has always been a central aspect of listening and reading instruction and has been investigated from different theoretical perspectives, i.e. the linguistic, cognitive, and sociocultural perspective\(^2\) (Kern, 2000). For this reason, this chapter aim to review research associated with the complex problem of L2 text comprehension (2.2). More precisely, the chapter examines the cognitive aspects of text comprehension presented in L2 academic publications informed by theoretical conceptions of cognitive psychology (2.2.1) and socio-

\(^2\) Here the term “socio-cultural” is related to the cultural-historical theory of higher cognitive development, proposed by Vygotsky.
cultural theory (SCT), as proposed by Vygotsky (2.2.2). Additionally, the chapter scrutinizes the text comprehension models outlined in L2 reading and listening research (2.3.1) and presents a model of L2 listening comprehension (2.3.2). The chapter also includes a chronological overview of testing approaches used in L2 listening instruction and analyzes current views, debates and recommendations on the use of comprehension questions in L2 listening assessment presented in the professional literature (2.4). To complete the review of L2 assessment practices, the chapter examines some recent exploratory work that has been done on the implementation of diagnostic assessment, including listening diagnostic assessment, in L2 contexts (2.5). Further, a number of issues raised in recent L2 listening research are addressed, i.e. the need for a shift in research and teaching from the product to the process of listening and the necessity of investigating listening processes through qualitative methods (2.6). Finally, a brief summary of chapter content and some concluding remarks are provided (2.7).

2.2 Text comprehension: extending cognitive dimensions

2.2.1 Text comprehension: cognitive perspective

Within the L2 cognitive paradigm, listening and reading are primarily seen as listening and reading for meaning. They are perceived as cognitive, intrapersonal problem-solving processes that occur within the listener/reader’s mind and are closely related to his/her prior knowledge (Bernhardt, 1991; Swaffar, Arens, & Byrnes, 1991;
Buck, 2003). Interestingly, the studies published 15 years ago view text comprehension as a meaning-extracting process (e.g. Bernhardt, 1991, Swaffar et al., 1991), while more recent publications view it as a meaning-constructing process (e.g. Roebuck, 1998; Kern, 2000, Buck, 2003).

The meaning-extracting process heavily relies on the idea that meaning is embedded in texts and readers/listeners extract this meaning from the text, making connections between new information obtained from the text and their prior knowledge, drawing inferences and evaluating the author’s intent encoded in the text. Such a vision of the meaning making process, linked to the conduit or container metaphors of communication, has long dominated L2 comprehension research. It is based on the idea that “texts contain meaning [and] language is a neutral transparent medium for carrying meaning” (Kern, 2000: 49).

In later developments, this point of view was challenged by the proponents of the meaning-constructing view on text comprehension, where it was argued that the meaning-extracting model does not adequately capture the complexities of human communication and can be compared to the transmission of information via a fax machine (Kern, 2000). However, as often occurs in human communication (e.g. in conversations), meaning is not determined ahead of time but is created at the moment when utterances are produced (see also 2.2.2 for a review of Appel and Lantolf’s (1994) study on L2 learners’ recall of written texts and the role of private speech in comprehension). It is believed that meaning is mutually co-constructed by all participants involved in communication processes that usually take place at the confluence of language and context. Therefore, contexts can also have an impact on comprehension. In
this regard, Omaggio-Hadley (2000) claims that contexts supply important extra-linguistic information that helps, to some extent, to fill up the gaps in understanding messages by activating the appropriate schema structures.

The advocates of the constructionist framework maintain that meaning is not something packaged in the text that the listener/reader has to unpack but “is constructed by the listener [reader] in an active process of inferencing and hypothesis building” (Buck, 2003: 29). Similarly, Roebuck (1998) notes that text comprehension is a meaning making activity that results in the interpretation of a text applicable only to this particular listener/reader (text receiver) at this particular time and depends on his/her intentions and decisions about how much meaning is to be actualized.

Recently the L2 research has begun to include voices arguing in favor of the inclusion of socio-cultural dimensions. For example, Kern (2000) is quite cautious about tendencies in L2 research that separate linguistic, cognitive and social factors in language acquisition. He argues that cognitive dimensions are not sufficient in themselves to explain the complex process of language development. Kern (2000) states that the predominance of the cognitive dimensions in L2 research, particularly in comprehension research, creates an illusion that, for example, reading acquisition is “a naturally occurring process” and not “a socially constructed phenomenon” (p. 34). In Kern’s view, the inclusion of a socio-cultural dimension in the Vygotskyan tradition would allow L2 research to account better for social factors and might enhance our grasp of what happens when language learners try to produce or to understand spoken or written discourse. He overtly calls for a broader approach to language research and teaching in order to reinforce the language teaching/learning process. In his view this kind of
multidisciplinary approach should borrow from various theoretical frameworks and in so doing to extend the dimensions of L2 research paradigm. In the section that follows a brief overview of the sociocultural view on text comprehension is provided.

2.2.2 Text comprehension: a sociocultural perspective

In his works, Vygotsky repeatedly discusses the problem of comprehension due to its critical importance for the learning process (e.g. Vygotsky, 1987, 1996 1997). In order to have a better grasp of the SCT view on this complex mental process, Leontiev (2003) first suggests considering Vygotsky’s thoughts on reading comprehension. Leontiev (2003) refers to three of Vygotsky’s ideas which in his view are fundamental for the present discussion; he emphasizes, however, that these ideas are not often cited.

First, Vygotsky (1997a:143) states: “Most think that understanding is greater with slower reading; however, actually with rapid reading, understanding is better [because] the different processes occur at different rates and the rate of understanding is more compatible with a rapid reading rate.” Then, Vygotsky continues: “Unfortunately, experimental research has thus far studied reading as a sensory-motor habit and not as a mental process of a very complex order…To a certain degree, the work of the visual mechanism is subordinate to the processes of understanding” (ibidem). In Leontiev’s view, this statement by Vygotsky still remains of critical importance today, specifically for educational psychology.

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3 In the original text, Vygotsky uses the Russian word ‘понимание’ [poni’manie], which can be translated as either ‘comprehension’ or ‘understanding’.
4 In the original text, Vygotsky uses the word ‘ибо’ [‘ibo] and ‘или’[‘ili] meaning ‘or’ as it appears in the translation. ‘Ибо’ is normally translated as ‘because, as, since ‘while ‘или’ is translated as ‘or’.
Second, Vygotsky stipulates (1997a:143):

It is clear to us that understanding does not mean that in reading each sentence we generate pictures [images\(^5\)] of all objects mentioned in it [sentence]. Understanding cannot be reduced to a graphic resurrection of the object or even to naming of the word; more likely, it consists in operating with the sign itself and referring it to meaning, to a rapid movement of attention, and isolating different points that are at the center of our attention.

An imbecile’s\(^6\) reading gives a very clear example of reading without understanding. P.Ya. Troshin describes an imbecile who in reading became delighted by every word: “A ladybird (ay, a bird, a bird! – Agitated pleasure) doesn’t know, doesn’t know! – ([The same reaction])” or “Count Vitte came (he came, he came!) to Petersburg (to Petersburg, to Petersburg!” etc.

Concentration of attention, attaching it to each separate sign, inability to control attention and transfer it so as to be oriented in the complex internal space that might be called a system of relations are the imbecile’s basic traits of “understanding” the text. Conversely, normal understanding is the process of establishing relations, selecting the important [ideas], in a transition from separate elements to the meaning of the whole (Italics added).

Third, Vygotsky (1996: 209-211, my translation\(^7\)) concretizes that:

Reading is a complex process in which the higher mental functions operate in thinking, and the child’s developed or underdeveloped reading is tightly connected to his/her development of thinking… Text comprehension presupposes the preservation of the necessary proportional weight of words or modification of these proportions, until they produce a result which satisfies the goal of reading. Text comprehension is similar to problem solving in mathematics. It consists in the selection of the correct elements related to the situation, in the appropriate combination of these elements and in their evaluation in order to determine their relevance for text comprehension… The process of reading and the teaching of reading

\(^5\) In the original text, Vygotsky uses the word ‘образ’ ['obraz] which can be translated as ‘manner, way, shape, figure, image, icon etc.’ depending on the context. Although M.J. Hall translated ‘образ’ as ‘picture’, I do think that in this context probably the English word ‘image’ conveys better Vygotsky’s idea of ‘образ’.

\(^6\) At Vygotsky’s time such terms were commonly used in academic publications and were not intended as derogatory.

\(^7\) This passage is taken from Vygotsky’s paper *The pedagogical analysis of the pedagogical process*, which has not yet been translated from Russian into English (for a summarized discussion of this paper see van der Veer and Valsiner, 1991:329-331).
are tightly linked to the development of inner speech. (as cited in Leontiev, 2003:141)

In addition to these views of Vygotsky mentioned in Leontiev (2003), the following relevant quotation from (Vygotsky 1987: 283) can be added:

Understanding the words of others also requires understanding their thoughts. And even this is incomplete without understanding their motives or why they expressed their thoughts. In precisely this sense we complete the psychological analysis of any expression only when we reveal the most secret internal plane of verbal thinking --its motivation.

While discussing the text comprehension process, Leontiev (2003) explains that in general terms, the text is considered understood if one can explain the idea of the text using his/her own words, i.e. using a paraphrase, a translation from one language to another, a semantic compression of the essential content of the original text (e.g. summary, key-words, annotation, etc.). In fact, Appel and Lantolf’s (1994) study provides support for Vygotsky’s idea on the importance of inner speech in the reading process and Leontiev’s idea on paraphrasing in the comprehension process. In their study situated within the Vygotskyan framework, Appel and Lantolf investigated the effects of verbalization on text comprehension. The participants of the study were invited to complete L1 and L2 text recall tasks intended to mediate understanding of written texts through speaking. While producing their recalls and while facing difficulties related to text comprehension, adult participants often relied on private speech to help them make sense of what they were reading. Appel and Lantolf explain this phenomenon as follows: “in the face of difficult tasks (cognitive, social, or emotional), adults have continuous access to ontogenetically prior knowing strategies [i.e., private speech, which originates
in the egocentric speech of childhood) that allow them to maintain and regain control of their mental activity” (p.438). In addition, Appel and Lantolf revealed that “engaging in the verbal reconstruction of a silently read discourse provides readers with the opportunity to remember and organize the text and thereby enhance their comprehension” (p. 449). On the basis of their experimental results, the researchers argue that humans continue to construct meaning of a read text through conversations with others, “with the self in the presence of others […], or, as in the case of our subjects, with the self in the presence of no one other than the self. All of these activities are at their core social” (Appel & Lantolf, 1994:449).

Leontiev (2003) further elaborates on his discussion and introduces the notion termed ‘the image of the text’s content’. He notes that this is not the final result of text comprehension but rather it represents the content component of text comprehension process. The ‘image of the text’s content’ is dynamic. Leontiev provides a range of examples illustrating this notion. For instance, after having read a friend’s letter one can feel that things are not going well for him or after having heard the verbal portrait of a wanted criminal one can imagine his appearance; or after having read a newspaper article, one can summarize it in one or two sentences. Leontiev concludes that texts are not functionally equal and can be differently understood.

For Leontiev, text comprehension is a complex activity that includes perception. He asserts that the perception of the text implies the same characteristics as perception of
According to Leontiev, when we deal with a text, we operate with what goes beyond the text, i.e. with the ever-changing real world which exists outside and comprises diverse events, situations, ideas, feelings, intentions, human values, etc. Leontiev explains that humans reflect the real world in the image of the text’s content, using a specific perceptive technique. The formation of the image of the text’s content is mediated through this perceptive technique.

In his discussion of text comprehension Leontiev also refers to Bakhtin, who identifies text comprehension as “the correct reflection of reflection. Through the author’s reflection, the reader reaches the reflected object” (Bakhtin, 1986:484; as cited in Leontiev, 2003: 141; my translation). For Bakhtin (1986), the content of the text is polyphonic and can result in many interpretations. In this regard, Leontiev points out that certainly everyone makes his/her own meaning out of the text. However, while perceiving a text, we do not construct different worlds but rather we come to see the same world from different perspectives.

2.3. Text processing models (schema theory)

2.3.1 Text processing: bottom-up, top-down and interactive models

Over the last several decades comprehension research has yielded many models that have attempted to explain the process of comprehension, be it reading or listening comprehension. However, Swaffar et al. (1991) point out that the question of “how

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8 Leontiev (1981) states that the characteristics of perception are integral, structured, constant, meaningful and concrete. These characteristics enable humans to orient themselves in this continuously changing world (for more details see Leontiev, 1981: 32-33).
cognitive processes operate to promote comprehension and learning is still a matter of conjecture. Even the relationship between comprehension and learning is itself unclear” (p.52). The following paragraphs will focus on the most widely known text processing models used in L2 comprehension research, namely bottom-up, top-down and interactive models.

As stated by Flowerdew and Miller (2005), the first model of text comprehension was bottom-up; it was developed in the 1940s and 1950s. The bottom-up model primarily considers linguistic dimensions in text processing. From the perspective of bottom-up model, for example, the listening comprehension process involves the ability to recognize phonemes, which are then “combined into words, which, in turn, together make up phrases, clauses, and sentences” (Flowerdew & Miller, 2005: 24).

In a similar vein, Buck (2003) describes bottom-up model as one involving the L2 learners’ language knowledge, i.e. words, syntax, grammar, during text processing and outlines four stages of bottom-up oral input processing. During the first stage, listeners decode phonemes; in the course of the second stage, they recognize words; during the third stage, the syntactic level and analysis of the semantic content occur and listeners “arrive at a literal understanding of the basic linguistic meaning” (Buck, 2003: 2); and in the fourth stage, listeners interpret the literal meaning embedded in the input depending on the communicative situation that helps them to understand the speaker’s message. Buck claims, however, that the oral input processing does not always follow the preset order of stages presented above and entails the interaction of bottom-up and top-down processing, rooted in the individuals’ knowledge of the world. Written input requires the same processing, i.e. readers do not operate exclusively from bottom up or top down, but
work from both directions. However, it should be noted that when listening to oral texts, listeners deal with a number of features unique to spoken discourse only, i.e. sound modification, prosodic characteristics (e.g. stress, intonation), hesitations, the involuntary breaks, ellipses, redundancy, the grammatical reconstruction of utterances, repetitions and corrections etc. (e.g. Mironova, 1982, Miniar-Belorutchev, 1990; Kinginger, 1998; Buck, 2003).

With regard to top-down model, Flowerdew and Miller (2005) note that it was put forth by researchers who experimentally confirmed that listeners can recognize truncated words presented in various contexts, but cannot recognize “truncated sounds in isolation from the words they form a part of” (p. 25). It was established that the decoding of verbal messages depends more on listeners’ prior knowledge of the world than on acoustic signals. Therefore, the top-down model heavily relies upon previous contextual knowledge in text processing (Bernhardt, 1991; Carell, Devine & Eskey, 1991; Swaffar et al., 1991; Kern, 2000, Buck, 2003; Flowerdew & Miller, 2005). In this regard, a number of parallel theories have attempted to explain how the previous contextual knowledge is stored in memory. These theories are known as frame theory, script theory, scenario theory, schema theory etc., however, schema theory, proposed by Rumelhart and Ortony (1977), is considered to be the prevailing theory used in L2 research (Buck, 2003).

According to Rumelhart and Ortony’s theory, schemata are structures that are stored in memory. These structures represent knowledge of events that repeatedly occurred in individuals’ previous cognitive experience, e.g. going to a grocery store, being in an airport or checking in to a hotel. As soon as the structures of a particular
event are “stored as a schema in memory, it aids individuals in negotiating future events, in allowing them to predict what is likely to happen” (Flowerdew & Miller, 2005: 26). In relation to listening comprehension, Buck (2003) similarly explains that in many cases listeners are able to foresee the meaning of a word before deciphering its phonemes and, being involved in a concrete situation, they can anticipate, using their knowledge, what they will hear.

L2 schema research has also shown that successful text comprehension depends on top-down processing. That is, comprehension depends on L2 listeners’/readers’ familiarity with the topic of the text and whether or not they share the same previous knowledge with the person producing a spoken or written message (Bernhardt, 1991; Kern, 2000). Clearly, the lack of the background schema usually hinders text comprehension (Swaffar et al., 1991). In this respect, L2 researchers have expressed concern about the extent to which L2 learners can share background knowledge with the producers of spoken and written texts. For this reason, Carell, Devine and Eskey (1991) propose to divide schemata structures into two types, i.e. content schemata and formal schemata. In their view, content schemata accounts for individuals’ prior knowledge and guides their expectations regarding events and situations, whereas formal schemata centers on individuals’ knowledge of the discourse structures used in different types of texts. Carell and al. (1991) highlight the importance of these two types of schemata for text comprehension process, specifically for L2 text comprehension which can be distorted because of schemata mismatch generated by cultural differences.

Thus, L2 studies point out that listening and reading comprehension are complex multidimensional processes in which many factors come into play. While reading or
listening to texts, learners employ their prior contextual knowledge (top-down process) as well as their L2 knowledge (bottom-up process). For this reason, L2 researchers highlight the necessity of synthesizing both text processing models and call for looking at text comprehension through an interactive model when designing experiments. As noted by many researchers, the interactive model allows better understanding of how L2 learners process written/spoken texts and how bottom-up/top-down processes function in L2 learners (e.g. Bernhardt, 1991; Swaffar et al., 1991; Vandergrift, 1998; Roebuck, 1998; Rost, 2002; Buck, 2003; Flowerdew & Miller, 2005). In this fashion, Rost (2002:96) explains how these two processes operate in listeners as follows:

Speech perception and word recognition are the ‘bottom-up’ processes in listening: they provide the ‘data’ for comprehension. If the listener does not recognize enough of these bottom-up cues in order to process the speech in real time, he or she will rely more exclusively on ‘top-down’ processes semantic expectations and generalizations. (Bold in the original)

Rost (2002) also provides a definition of text comprehension which integrates both of the text processing models and which nicely summarizes the present discussion on this complex process:

Comprehension is the process of relating language to concepts in one’s memory and to references in the real world. Comprehension is the sense of understanding what the language used refers to in one’s experience or in the outside world. ‘Complete comprehension’ then refers to the listener having a clear concept in memory for every referent used by speaker. (Rost, 2002: 59)

A critical point raised by recent cognitive research is that text processing models are often researched in laboratory settings and for that reason they do not look at how listening (or reading) occurs in real life situations (Flowerdew & Miller, 2005). Despite
the proven value of text processing models in explaining how comprehension processes operate in listeners/readers, the recent findings in L2 comprehension research suggest that these models do not capture all of the components that accompany input processing because they do not account for social and cultural factors. The next section will discuss an updated text processing model which sees listening comprehension as a process involving primarily bottom-up/top-down/interactive processes but also includes individual, social and cultural dimensions.

2.3.2 An updated text processing model of L2 listening

Flowerdew and Miller (2005) present a cognitive model of L2 listening process and recommend that language educators use it as a pedagogical tool while designing teaching/testing listening activities in a learner-centered setting. Figure 2-1 represents Flowerdew and Miller’s model.
In addition the core processes which are at the heart of the model, it includes eight dimensions that “may affect the way messages are perceived and processed” (Flowerdew & Miller, 2005:28). The authors of the model argue that these additional factors define more accurately the complex structure of L2 listening comprehension. These dimensions are briefly outlined in the following paragraphs.

The individualized dimension opens up the possibility of accounting for individual variation in text processing and offers L2 teachers the possibility to be more sensitive to learner’s needs. For example, teachers should bear in mind that L2 novice listeners (or readers) need first of all to develop bottom-up skills whereas intermediate or advanced learners may concentrate their efforts on developing their top-down skills, while at the same time continuing to improve their bottom-up skills.

The cross-cultural dimension provides instructors with the opportunity to account for differences in cultural interpretations of texts. These differences are due to the L2
learners’ schemata and background knowledge acquired in their L1 community. Flowerdew and Miller point out that cultural and age/sex/social group differences may cause dissimilar expectations and interpretations of a given text, specifically in L2 situations.

The social dimension views the listening comprehension process as a social activity. Flowerdew and Miller (2005) state that the core text processing models present listening mainly as a psychoperceptual process because they do not take into account interactive dialogues (or conversations) that routinely occur between interlocutors in the real world. They propose to include conversations in any L2 listening comprehensive model and see two-way conversations as “a paradigm case for the social dimension of listening” (p.89).

In relation to the contextualized dimension, Flowerdew and Miller claim that in real-life situations, the listening process is always accompanied by various activities that facilitate comprehension. For example, a typical situation in educational settings often requires students to listen to the lecturer, to look at visual aids etc., and before the class, they may be assigned to read some materials related to the topic at hand. In this regard, Flowerdew and Miller emphasize the importance of the contextualized dimension for L2 settings in order to avoid situations in which non-contextualized listening to isolated texts impedes input comprehension because it represents “unnatural listening”.

The affective dimension included in the model encompasses variables influencing the process of language learning in general, and listening comprehension in particular.

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9 It should be added here that in light of Appel and Lantolf’s (1994) study the social dimension of comprehension also requires psychological dialogue or private speech.
Following Mathewson’s (1985) affective model for reading, Flowerdew and Miller consider four variables: attitude, motivation, affect, and physical feeling. The attitude variable consists of learners’ positive attitude to listening and to the source of the listening material; the motivation variable involves learners’ curiosity, competence, achievement, esteem, desires to know and to understand, as well as aesthetic appreciation; the affect variable is unstable in terms of duration and relates to feelings (e.g. moods, sentiment, emotion etc.) that influence someone’s decision to listen or not to listen to a text; physical feeling comprises two components: unfavorable conditions (e.g. background noises) that might affect feelings and the text itself which might provoke positive or negative physical feelings (e.g. the feeling of pleasure/sadness from an enjoyable/tragic story). Two supplementary variables that account only for L2 listening situations are also included in the model: the physical presence of speaker and the learning goal in listening which in turn includes two elements, i.e. learners’ willingness to understand verbal messages and above all learners’ willingness to develop listening abilities in order to achieve a good level of language proficiency.

The strategic dimension includes language awareness and learning strategies\textsuperscript{10}.

On the basis of recent findings in this area of L2 research, Flowerdew and Miller propose to consider learning strategies that account for the development of listening abilities.

\textsuperscript{10}Current L2 research identifies two types of strategies used by L2 text receivers when processing aural/written input. (for more details see, e.g. O’Malley & Chamot, 1990, Flowerdew & Miller, 2005): 1) Cognitive strategies which help learners to solve learning problems “by considering how to store and retrieve information” (Rubin, 1994: 211); 2) Metacognitive strategies which learners use for planning, monitoring, or evaluating the success of the learning activity, e.g. text comprehension.

With regard to listening comprehension, metacognitive strategies include directed attention, selective attention, self-management, self-monitoring, delayed production, self-reinforcement strategies. Cognitive strategies which may play an important part in processing listening input comprise repletion, translation, note taking, deduction, recombination, key word, contextualization, elaboration, transfer, inferencing, questions for clarification. For example, O’Malley et al. (1989) and
The intertextual dimension is grounded in Bakhtin’s concept of intertextuality. This dimension is primarily focused on linguistic relations existing among texts as opposed to the contextualized dimension, which assumes a much broader type of textual relations. In addition, Flowerdew and Miller assert that the intertextual dimension brings the notion of register and genre into the picture of L2 listening comprehension. Different registers and genres have their own continuously repeated patterns of language use or intertextuality. In relation to recurrent patterns, Flowerdew and Miller admit that “in this respect the notion of intertextuality is similar to that of schemata, although the latter are concerned with more than just language” (p. 94).

The critical dimension characterizes texts as social artifacts created by members of a particular society whose relations are affected by inequalities in power. Therefore, text comprehension, in particular listening comprehension, becomes a political activity because all texts are colored with ideologies of individuals who produced those texts. Such an approach to text comprehension requires the ability to analyze a text in context and to decode ideologies embedded in it. Flowerdew and Miller admit that the critical dimension can be implemented only at an advanced level. In their view, this dimension

Vandergrift (1998) note that successful novice and intermediate L2 listeners, when processing aural input, frequently have recourse to both metacognitive strategies (e.g. monitoring, predicting) and cognitive strategies (e.g. elaborating, inferencing), whereas less successful L2 listeners use more cognitive strategies (e.g. transfer, translation).

Flowdew and Miller illustrate intertextuality with three examples of how common English idioms and expressions are used in television advertisements. For instance, the slogan “Some people get all the breaks” created for the advertisement of the Four Seasons hotel chain is based on the word play with break. In this particular context, the word break has two meanings, namely “good luck” and “short holiday”. Here Flowerdew and Miller advance a questionable argument that “everyday conversation often draws on advertising language for its own uses” and that this language may cause misinterpretations, when utilized in L2 contexts (p.93). However, one could argue against this view. Assuming that some expressions imposed by mass-media become well-known, and even popular, among certain members of a particular speech community does not necessarily guarantee that all individuals belonging to this speech community would use them in their casual conversation or, moreover, would be familiar with these expressions. Therefore, the use of advertising language gives rise to misunderstandings not only among L2 learners but among native speakers as well.
decreases the degree of trivialization which often accompanies L2 language learning and prepares students to be active, engaged and responsible members of society.

Flowerdew and Miller point out that the three core processes of the comprehension model should unquestionably be taken into consideration by L2 instructors and listening test developers, but the application of the eight dimensions are optional and may vary depending on the goal of every particular listening activity. The discussion now turns to listening approaches and assessment practices developed by the L2 field over the last fifty years.

2.4. Listening comprehension: assessment practices

2.4.1 Approaches to testing L2 listening: a chronological overview

Buck (2003) identifies, analyzes and presents the pros and cons of three approaches used in L2 listening testing: the discrete-point approach, the integrative approach, and the communicative approach. It should be pointed out, however, that these three approaches have dominated the field of L2 pedagogy over the last half century.

The discrete-point approach to listening assessment

The essential idea of the discrete-point approach is to test one small part (i.e. the language elements) of a decontextualized utterance. The most common types of listening tests within this approach are phonemic discrimination, paraphrase recognition and response evaluation.

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12 The discrete-point approach appeared when the field of L2 pedagogy was dominated by the audio-lingual method. Rooted in structuralism and behaviorism, the discrete-point approach to testing put emphasis on the identification of isolated linguistic elements.
According to Buck (2003), phonemic discrimination tasks are the most representative tasks of the discrete-point approach. This type of assessment requires students to listen to a series of isolated words or sentences and then to indicate what sounds or words they have just heard. Usually, phonemic discrimination tasks focus on minimal pairs and students are expected to identify correctly the words they have heard. Example 2-1 presents a typical phonemic discrimination exercise (from *Phonétique, 350 exercices*, Abry & Chalaron, 1994: 31):

**Exemple 2-1:**

Cochez la phrase entendue. Ecoutez (*Circle the sentence that you hear. Listen*):
1. Elle est pure. / Elle est pour.
2. Tu es sûr. / Tu es sourd.

At present phonemic discrimination tasks are seen as “unnatural tasks”. In today’s language classrooms, students usually listen to texts and not to isolated sentences. However, despite the current unpopularity of minimal pairs, this type of testing is still valuable and can be used if some sounds of the new language are absent from the learners’ first language (e.g. English does not differentiate between the sounds [u] and [y] or Japanese does not distinguish between /l/ and /r/).

*Paraphrase recognition* tasks consist in reformulating what was heard. In these tasks, listeners are expected to select one reformulated sentence that is the closest to the sentence they originally heard. An illustration taken from Flowerdew and Miller (2005: 199) follows:

**Exemple 2-2:**

Examinees hear: *Mary asked her mother for some money to go to the cinema.*
Examinees read and choose the form:
Mary wanted money to buy some new clothes.
Mary wanted to see a movie so she asked for some money.
Mary asked her mother to go with her to the cinema.

In *response evaluation* tests, listeners typically hear a question for which they are expected to provide the most appropriate answer. This assessment task requires students to know lexical items and to pick them out from the string of words they heard in order to provide a correct answer. The following example represents this type of task (from Buck, 2003: 65).

**Exemple 2-3:**

Examinees hear:
*How much time did you spend in Boston?*

Examinees read:
(a) Yes, I did. 
(b) Almost $ 250 
(c) Yes, I had to
(d) About four days

Quite understandably, the discrete-point tests reflect the developments in the science of linguistics at that time. That is, at that period of time, it was assumed that spoken language reflects written language and that the elements of the language should be detached and tested. In light of contemporary views on listening tests, the main criticism here is that the decontextualized utterances widely used in the discrete-point tests ignore the redundancy of spoken language and the context of communication which provides listeners with helpful information for making inferences (Buck, 2003).

*The integrative approach to listening assessment*
In the early 1970s, there was a shift from the discrete-point to the integrative approach to testing. This approach to listening tests builds on the assumption that more than one element of language should be assessed at a time. According to the developments in linguistics at that time, it was believed that the elements of language are bound to rule-governed relationships and that the knowledge of language presupposes the knowledge of these relationships. The most eminent advocate of this approach, Oller (1979), defines integrative tests as “any procedure or task that causes the learner to process sequences of elements in a language that conform to the normal contextual constraints of that language” (Oller, 1979: 38, as cited in Buck, 2003: 67). Thus, the goal of integrative tests is to assess language processing and the types of tasks used to test listening in this approach are dictation, sentence repetition activities, gap filling tests, statement evaluation and translation (Buck, 2003).

**Dictation tests** are the most representative test technique associated with the integrative approach. They are viewed as language processing tasks that assess learners’ performance at the phonological, syntactic and semantic levels and in this sense they are integrative (Oakeshot-Taylor, 1977; Oller, 1979, as referred in Buck, 2003). The integrative test procedure usually requires learners to listen to a text twice and to write down the segments of the text they hear. As noted by Buck (2003), the main problem with dictations is that they do not measure the ability to comprehend the text, and that they test listening only at two narrow levels: the word recognition level (if the examinees are presented with short segments of a text) and the linguistic level (if the test-takers are exposed to long segments).
Translation tests are not generally viewed to be integrative tests, however, according to Scott, Stansfield and Kenyon (1996), Buck (1992), they are quite similar to dictation tests. In a translation test, the learners listen to a recorded text, divided into short segments beforehand. The test procedure usually requires learners to write down in their L1 what they hear in the L2. Buck (1992) sees the translation process as a reliable source of evidence that the examinees process the semantic meaning of the audio text. The two major drawbacks to these tests are: first, the examiner cannot be monolingual, and second, the examiner and examinees must have the same L1.

Sentence repetition tests are a variation of dictation tests, but in this case examinees are presented with an aural text and are required to retell the segments of the text instead of writing them down. During the test procedure, examinees typically repeat a decontextualized sentence that they heard once. Their responses are tape-recorded in order to be scored later. The sentence repetition tests proved to be useful with illiterate learners or learners whose writing skills are not yet developed, e.g. children. However, as we can see, neither dictations nor sentence repetitions assess the ability to understand the meaning encoded in the texts (Buck, 2003).

Gap filling tests were primarily developed for testing reading skills. However, this procedure has been used to assess listening as well. In gap filling tests, learners are usually given transcripts of aural texts containing blanks. Then, they are asked to listen to the recording of the printed text they have and to fill in the blanks. This is illustrated by the following example:\(^\text{13}\):

Example 2-4:

\(^\text{13}\) This example is taken from a real-life listening test designed by the author of this dissertation.
Examinees hear:
Conforama (a French radio-advertisement for furniture store chain in France)
- Deux, un… il est lancé le nouveau record Conforama !!!
- Un ensemble composé d’une grande bibliothèque, plus un bureau, plus une chaise dactylo : 795 francs seulement ! Bibliothèque et bureau colories frêne vert ou pin !
- 795 francs, les trois pièces disponibles immédiatement ! Seule Confo peut vous l’offrir !
- Mais ce record, c’est jusqu’au 24 août !
- Venez chez Conforama : le pays ou la vie est moins chère !

Examinees read:
Complétez les phrases suivantes (complete the following sentences):
- Deux, un… il est lancé le _____________ _____________ Conforama.
- Un ensemble composé d’une _____ _____, plus un _____, plus une _____ dactylo :
  795 francs seulement. Mais ce record, c’est jusqu’au _____ _____ _____ seulement !

As noted by many L2 researchers, the gap filling tests have an obvious weakness when used for testing listening comprehension (Henning, Gary & Gary, 1983; Weir, 1993; Buck, 2003). That is, examinees can listen only for missing parts and/or complete the blanks in the text on the basis of their guesses without really trying to understand the text. In this regard, Buck (2003) complains that although gap-filling techniques might still be an effective testing tool for reading tests or language tests, they cannot always accurately test comprehension of oral texts. The main criticism of gap-filling tests and listening recall tests is that they can provide the evidence that learners processed (heard) the missing words but it does not prove that they understood the text they heard. Hence, the questions: what do these types of tests measure? To what extent do they measure text comprehension?

Statement evaluation tests require learners to evaluate the truth of a statement (see Example 2-5) or to compare two sentences and say whether the second sentence has the same meaning or not (see Example 2-6). For example, learners hear:
Example 2-5:

*The Moon is Earth’s natural satellite.*

OR

*We choose our clothes according to the weather: a warm sweater is better for a cold day than a T-shirt.*

Example 2-6:

(a) *New-Orleans was devastated by hurricane Katrina.*

(b) *When the hurricane came ashore, the city was devastated.*

Despite the certain disadvantages of statement evaluation tests (e.g. again examinees are exposed to decontextualized sentences), the test procedure itself can guarantee to some extent that examinees process the semantic meaning of the sentences; otherwise it would be impossible for them to evaluate correctly the statements they hear.

The integrative approach made some progress in testing listening by focusing on the sentence-processing level and in this sense, went beyond the bounds of the discrete-point approach (e.g. Swaffar et al.; Buck, 2003). The integrative approach developed a range of listening tasks with which listening could be processed in real time. However, these tasks allow listeners to attain only the semantic level of the text and do not encourage the test-taker “to relate linguistic information to a wider context or to ask the test-taker to process inferential meanings” (Buck, 2003: 82). Certainly, the difference between previous and current views on listening assessment is dramatic due to further theoretical and experimental developments in L2 pedagogy. At present, listening as well as reading is no longer considered to be listening or reading if used only for improving
pronunciation, studying grammar or vocabulary because “by definition, reading
[listening] involves comprehension. When readers [listeners] are not comprehending,
they are not reading [listening]” (Chastain, 1988: 217). In this regard, the communicative
approach is one of the approaches that has put emphasis on purposeful listening and has
endeavored to test it.

*The communicative approach to listening assessment*

The communicative approach ¹⁴ states that the use of language is determined by
the need to communicate. For this reason, communicative teaching privileges authentic
communication and presents learners with the spoken and written forms of language in
context. Since the early 1980s, the communicative approach has attempted to incorporate
these underlying ideas into assessment practices.

The key features of the communicative approach to testing are *authenticity* and
*purposefulness* (e.g. purposeful listening). The authenticity feature is manifest in the use
of texts taken usually from authentic sources (e.g. radio stations, TV channels of the L2
speech community). The purposefulness feature occurs when the test task approximates
(or simulates) real-world situations. An example of a communicative listening test that
integrates these two features follows:

**Example 2-7:**

Examinees hear/watch tomorrow’s weather forecast recorded in advance from an
authentic radio or TV channel. There are at least two possible options for the use
of such an authentic text:

1. The intermediate/advanced test-takers can be asked to write down or to tell the
   examiner what clothes they should wear tomorrow and why.

¹⁴ In addition to integrative approach, the 1970s also saw the rise of the communicative approach, which
has dominated the field of language pedagogy since the early 1980s and views language proficiency as
communicative competence.
2. The novice test-takers can be asked to circle pictures of clothes that they should wear or avoid wearing tomorrow and explain their choice in their L1.

Communicative tests as opposed to discrete point or integrative tests require excessive efforts for tests preparation. Despite these efforts, the communicative approach to testing has been popular and extensively used for more than two decades. According to Buck, the communicative approach to testing has faced at least two major challenges in the area of assessing listening comprehension. First, the existence of many communicative situations and many contexts challenges the generalizability of communicative listening tests. That is, the ability of examinees to perform in one particular test situation does not guarantee that they will be able to demonstrate the same ability in other situations (Buck, 2003; Flowerdew & Miller, 2005). Second, the communicative approach admits that there are many ways to interpret a text, many more than the test-developers can predict, and that the interpretation of a particular text depends on a particular learner, on his/her particular purposes and needs. In this situation, it is quite difficult to determine which interpretation of a text is correct or incorrect and it becomes problematic to design a test which would account for all the interpretations (Buck, 2003).

Another area that has gained considerable attention of L2 assessment research concerns comprehensive questions. These questions were extensively used in all three outlined approaches in order to assess/elicit text comprehension. Due to the importance of questioning in the process of checking listening comprehension, the next section discusses the use of comprehensive questions in listening assessment and instruction.
2.4.2 Testing L2 listening: comprehension questions

Many L2 scholars point out that questioning was and still remains the most common tool used for assessing text comprehension and can serve to assess the understanding of literal meaning of a text as well as the understanding of implicit meaning encoded in the text (e.g. Ur, 1984; Carell, Devine, & Eskey, 1991; Shrum, 1994; Omaggio-Hadley, 2000; Buck, 2003). However, Swaffar et al. (1991) caution that comprehension questions, e.g. true/false, multiple-choice, used in listening or reading tests can elicit the comprehension of isolated parts of a text but offer few clues about examinees’ understanding of how these text parts are connected. Quite on the contrary, Kern (2000) states that these questions “are useful techniques to help learners clarify the facts of a text” and their use enables students “to go beyond their vague hunches and encourages hypothesis-testing rather than random guessing” (pp. 161-162).

The types of comprehension questions that are widely employed for assessing the ability to understand spoken texts are short-answer questions, multiple-choice questions, true-false questions, and inference question. Flowerdew and Miller (2005) suggest dividing comprehension questions into display and referential questions. Display questions comprise short-answer, true-false, multiple-choice, gap-filling, information transfer, rearranging pictures and yes/no questions. They explain that there are at least three purposes for using display questions: to facilitate learners’ involvement in listening activities, to encourage less proficient learners and to elicit the basic comprehension of

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15 More complete discussions and recommendations on materials/activities currently used in teaching/testing listening comprehension can be found in publications devoted to general foreign language teacher training (e.g. Shrum, 1994; Omaggio-Hadley, 2000; Hall, 2001).
the text. An example of a display question which usually presumes only one possible correct answer follows:

**Example 2-8:**

Q: *How many cups of coffee did she drink this morning?*

Referential questions encompass open answers, summarizing and retelling. Contrary to the display questions, the referential questions may generate a variety of answers, as is illustrated in the following example:

**Example 2-9:**

Q: *How do you think Mary felt when she knew she was awarded a grant?*

When asking a referential question, teachers cannot predict how learners will retell or summarize the text. In this respect, Flowerdew and Miller advocate that teachers should accept all potential responses.

It is commonly agreed that comprehension questions can accompany a wide variety of texts, e.g. audio/video, literary texts (Shrum, 1994; Omaggio-Hadley, 2000; Hall, 2001). It is suggested that a set of questions designed to measure text comprehension should follow the order in which the information is presented in the text and that preferably one item of the text should be accompanied by one question (Thompson, 1995, as referred in Buck, 2003). Although comprehension questions seem easy to devise and are widely used in language classrooms, the L2 literature alerts test-developers that there might be some problems with their use (e.g. Savignon, 1997;
Omaggio-Hadley, 2000; Buck, 2003). The following paragraphs are specifically devoted to this point, but only in very general terms.

**Short-answer questions**

Short-answer questions are recommended to assess the comprehension of texts that contain clear and unequivocal information. This type of question presupposes brief responses of examinees which can be done in written or spoken form. Example 2-10 provides an excerpt from a real listening test, illustrating the use of short-answer questions:

**Example 2-10:**

Examinees hear:
Marine : J’organise une petite fête pour l’anniversaire de mon frère Étienne.
Eva : Ah, c’est super, et c’est quand ?
E : Au fait, la fête, ou est-ce qu’elle va avoir lieu ?
M: Et bien, chez mes parents. Ils ne seront même pas là et ils ont beaucoup de place pour recevoir les gens.

Examinees read the questions:
Q 1. For what occasion is Marine organizing a party?
Q 2. Who is invited to the party? List three people
Q 3. Where is the party going to take place?

Buck (2003) cautions that notwithstanding the simplicity of their design, it is not easy to produce good short-answer questions. When using this type of question, test-developers have to solve at least two problems: first, they need to decide in advance

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16 This is an extract from a test designed for intermediate students of French. The test was used in Spring 2004, at Penn State University.
which answers will be considered as correct and which will not; second, what answers will be considered as sufficient answers to the proposed questions.

**Multiple-choice questions**

In multiple-choice tests, the examinees are usually offered four options and are expected to select a correct one. An example of a multiple choice test is given in Example 2-11, taken from the free on line TOEFL listening samples:

**Example 2-11:**

Examinees hear:
*Woman: Did you have a pleasant week-end Bill?*
*Man: Yes, I studied quite a bit but on Sunday I took the evening off and went to the new movie with my brother.*

Examinees read:
*What did the man do on the week-end?*
A. *He did homework the whole weekend.*
B. *He spent time with his girlfriend.*
C. *He and his brother rented movies.*
D. *He went out with a family member.*

According to Buck (2003), in the L2 literature, multiple-choice questions are viewed as difficult to devise because they require high-level expertise from the test-developers. It was, for example, revealed that ambiguously formulated options compel test-takers to choose incorrect answers (e.g. Hanson & Jensen, 1994; Brindley, 1998). In addition to poorly formulated options, there has been another concern related to the text selection and multiple-choice testing. It appears that some texts selected for tests can generate a variety of interpretations. Therefore, when completing a listening task, examinees have to adjust their interpretation of such a text to the options proposed by the test-developers (Wu, 1998). In this respect, the literature suggests that the major concern of test-developers using a multiple-choice test should be in formulating plausible options,

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17 Regular TOEFL listening practice: [http://www.gettoefl.com/listening-tutorial.htm](http://www.gettoefl.com/listening-tutorial.htm)
e.g. options should be clearly stated in order to avoid the situations in which an incorrect option can be easily confused with the correct option.

True-false questions

In this format test-takers are expected to indicate whether statements based on an aural passage are true or false. Although true-false questions are extensively used in today’s’ language classrooms, the L2 literature has repeatedly expressed several concerns regarding the efficacy of this type of questioning (Brindley, 1998; Burger & Doherty, 1992). For example, Burger and Doherty (1992) caution teachers against the use of true-false questions for measuring listening abilities. They argue that in listening tests, learners’ prime concern is to understand what is said rather than what is not said. In addition, in test situations examinees are usually deprived of the possibility of listening to the text again and as such, they have no opportunity to identify false statements.

Another major concern is related to the random guessing which casts doubts on the reliability of true-false questions in measuring text comprehension. To some extent this concern is also applicable to multiple-choice questions. In fact, random guessing can help test-takers to produce correct answers. For that reason, true-false questions are considered less reliable than other types of comprehension questions. However, several researchers believe that in certain cases correct guessing displays partial grasp of the text (Buck, 2003).

Inference questions

In the current L2 literature, text comprehension is regarded as an inferential process because information is not always overtly present in the text. In this regard, it becomes fundamental to test learners’ inferencing abilities by using questions that go
beyond the literal meaning of a text (Burger & Doherty, 1992; Weir, 1993; Thompson, 1995, Buck, 2003). This type of question allows us to assess learners’ abilities to make inferences concerning implicit meanings encoded in the text. In fact, the current L2 views on listening or reading tests require the inclusion of inference questions, otherwise the test is not considered to be a good test.

Certainly, inference questions are the most difficult to develop and should be carefully designed. Given the fact that inferences are usually activated by background knowledge, the L2 literature recommends selecting spoken or written texts that include information shared by all examinees. It is important to decide in advance which responses will be considered as acceptable, and therefore, correct. For example, inference questions which seek to assess learners’ personal predictions or reactions are not considered as wrong answers. To illustrate this point, an example of inference questions is taken from a real test intended for intermediate university students learning French. In this test inference questions are used at the beginning and at the end of the listening activity.

**Example 2-12:**

1) **Pre-listening question.** Examinees read: The title of the text is *Que faire après le bac?* Judging from its title, what do you think the text will be about?
2) **Listening task.** Examinees listen to the text and complete the task.
3) **Post-listening question.** Examinees read: Was it difficult for you to choose your major? Did a family member influence your decision or was it your own decision?

According to Buck (2003), inference questions can assess the main idea of the text or of a passage from the text; the meaning of indirect speech; the information which is not explicitly presented in the text but is sufficient to make a pragmatic inference. For example, in order to elicit implicit text information, the test can include the following
question *what does the woman/man imply?*; this kind of question is extensively used in TOEFL listening tests).

Thus, the L2 literature reviewed considers comprehension questions as a valuable testing tool, specifying that the creation of the testing questions presents a considerable challenge and remains an object of discussion for specialists. It should be added, however, that the use of comprehension questions in L2 assessment practices can encounter another challenge. For example, Ableeva’s (2008) study has demonstrated that comprehension questions integrated into a traditional listening test faced difficulties with the elicitation of L2 learners’ text comprehension even at the linguistic level. In her study learners first listened to an authentic audio text twice and were asked to respond to a series of short-answer questions independently. The results of the test showed that learners, intermediate university students, were able to provide only partially correct answers to the questions (product). Then, using a diagnostic procedure grounded in Dynamic Assessment (see chapter 3 and 4), Ableeva asked students to listen to the text again (if needed) and engaged them in one-on-one dialogical teacher-learner interactions, which included comprehension questions. Through these interactions (process) Ableeva identified the source of problems that impeded learners’ text comprehension. It appeared that students’ independent performance was severely affected by the gaps in lexical and cultural knowledge and, above all, by the under-development of L2 phonology, which resulted in students’ inability to recognize even words they were already familiar with in written form. The results of the study have also shown that comprehension questions when used in a traditional (or non-dynamic) test did not guarantee students’ meaningful interaction with the text, and more importantly, were not able to determine the source of
problems encountered by students. Additionally, Ableeva’s study confirmed that Dynamic Assessment allows for a better access to listening processes diagnosis and for revealing “how listeners arrive at the right answer or why comprehension breaks” (Vandergrift, 2007: 192), since it employs dialogic interactions and qualitative interpretations of test results.

In fact, recent L2 literature has expressed concern over the current lack of L2 diagnostic tests allowing language educators to identify the source of learning difficulties and to track the development of learners’ language abilities (e.g. Buck, 2003; Alderson, 2005). Another concern addressed in L2 listening research is related to the predominance of product-oriented trend as compared to process-oriented approach in listening studies and instruction (e.g. Field, 2000, 2008; Goh, 2002; Buck, 2003, Flowerdew & Miller, 2005, Vandergrift, 2007). Given the fact that the present dissertation aims to supplement L2 diagnostic and developmental research as well as to contribute to research investigating the process of listening, the next two sections address the necessity of building up diagnostic assessment, including listening assessment, and its current developments in L2 contexts (2.5), and the need for the research that explores the interaction of listening processes and factors influencing L2 text comprehension (2.6.).
2.5 Diagnostic tests in listening assessment

2.5.1 Diagnostic tests in second language assessment

Alderson (2005), among quite a few others, (e.g. Spolsky, 1992; Buck, 2003; Alderson & Huhta, 2005; Huhta, 2008), is cautious about the fact that the L2 field has been too preoccupied with the standardization and the creation of high-stakes language testing to the neglect of diagnostic tests. He complains that this has given rise to “a considerable confusion and indeed ignorance about what diagnostic testing might be” (Alderson, 2005: 26). Moreover, Alderson (2005) argues that “even those who would concentrate their efforts on understanding classroom assessment procedures have failed to address the need for diagnosis of learners’ strengths and weaknesses” (p.2).

Before outlining the features that might constitute L2 diagnostic testing, Alderson draws a line between a diagnostic test and the battery of tests commonly used in language programs, i.e. placement, progress, achievement and proficiency tests. He establishes that these common tests are frequently reported to be diagnostic or at least to be able to perform some diagnostic functions (most especially placement tests). In this regard, Alderson clarifies that the main goal of a placement test is to group learners in courses that would fit their current L2 development. Conversely, a diagnostic test primarily intends to reveal strong/weak sides of learners’ abilities and in so doing informs teachers so that they can “guide learners on where they need to improve and give feedback to learners” (ibid., p.4).

Alderson then analyzes numerous L1 diagnostic studies. He states that L1 investigations are tightly linked to a theory, are conducted in one-on-one format with no
time limit and mainly seek to identify individual speech, reading and learning difficulties. He emphasizes that the goal of L1 diagnostics is to determine the source of problems experienced by learners and to help them make learning progress. Alderson also remarks that unlike L1 studies, aiming to develop “a typology of problems, […] and typical difficulties of those who are in some sense failing” (p. 24), L2 educational research “has moved away from problems and errors to strategies for overcoming problems” (p. 23). He concludes that L2 assessment research certainly has to start diagnostic explorations, asserting that:

If tests are informed by an adequate theory of language use, language development and language learning, and if learners can receive feedback on their performance and their ability immediately, then the possibility for the incorporation of assessment into language learning becomes apparent, indeed urgent (Alderson, 2005:12)

By bringing together the findings of L1 and recent L2 diagnostic studies, Alderson lists nineteen tentative features that might characterize L2 diagnostic tests (see Figure 2-2):
1. Diagnostic tests are designed to identify strengths and weaknesses in a learner’s knowledge and use of language.
2. Diagnostic tests are more likely to focus on weaknesses than on strengths.
3. Diagnostic tests should lead to remediation in further instruction.
4. Diagnostic tests should enable a detailed analysis and report of responses to items or tasks.
5. Diagnostic tests thus give detailed feedback which can be acted upon.
6. Diagnostic tests provide immediate results, or results as little delayed as possible after test-taking.
7. Diagnostic tests are typically low-stakes or no-stakes.
8. Because diagnostic tests are not high-stakes they can be expected to involve little anxiety or other affective barriers to optimum performance.
9. Diagnostic tests are based on content which has been covered in instruction, or which will be covered shortly.
10. Diagnostic tests are based on some theory of language development, preferably a detailed theory rather than a global theory.
11. Thus diagnostic tests need to be informed by SLA research, or more broadly by applied linguistic theory as well as research.
12. Diagnostic tests are likely to be less ‘authentic’ than proficiency or other tests.
13. Diagnostic tests are more likely to be discrete-point than integrative, or more focused on specific elements than on global abilities.
14. Diagnostic tests are more likely to focus on language than on language skills.
15. Diagnostic tests are more likely to focus on ‘low-level’ language skills (like phoneme discrimination in listening tests) than higher-order skills which are more integrated.
16. Diagnostic tests of vocabulary knowledge and use are less likely to be useful than diagnostic test of grammatical knowledge and the ability to use that knowledge in context.
17. Tests of detailed grammatical knowledge and use are difficult to construct because of the need to cover a range of contexts and to meet the demands of reliability.
18. Diagnostic tests of language use skills like speaking, listening, reading and writing are (said to be) easier to construct than tests of language knowledge and use. Therefore the results of such tests may be interpretable for remediation or instruction.
19. Diagnostic testing is likely to be enhanced by being computer-based.

Figure 2-2: A characterization of L2 diagnostic tests, (Alderson, 2005:11-12).
Alderson (2005) underscores that the L2 diagnostic features are hypothetical and are outlined with the intention to distinguish between diagnostic tests and other types of L2 tests. He repeatedly highlights that language diagnostic tests are not life-threatening and, therefore, are not high-stakes because they do not “directly affect people’s lives, like university entrance tests or proficiency tests for citizenship or employment” (p. 6). Hence, the results obtained through diagnoses cannot be interpreted from ‘Pass-Fail’ angles but rather these results should improve classroom instructional practices.

However, Alderson’s view of diagnostic tests as low-stakes is disputable, specifically that L2 field places learners’ language development at the heart of teaching/learning process. From a developmental perspective, it becomes evident that an inaccurate or incomplete diagnosis can result in inappropriate recommendations for helping learners develop and from this angle diagnostic tests are very high stakes (Lantolf, personal communication, 2008).

According to Alderson, the L2 diagnostic features are rooted in the results from computer-based language diagnostic test termed DIALANG18, conducted within the scope of a European Union-funded project since 1996. A brief description of DIALANG with a special focus on DIALANG listening test is provided in the next section.

2.5.2 DIALANG: listening diagnostic test

DIALANG is a free of charge online diagnostic test system available in fourteen European languages, i.e. Danish, Dutch, English, Finnish, French, German, Greek, Spanish, Portuguese, Italian, Swedish, Norwegian, Polish, and Russian. DIALANG is designed to assess learners’ proficiency in these languages and provide diagnostic feedback to educators and learners.

18 See also: www.dialang.org
Icelandic, Irish, Italian, Norwegian, Portuguese, Spanish and Swedish. In a nutshell, this testing system assesses language skills (Reading, Listening and Writing) and language aspects (Vocabulary and Grammar). The DIALANG reports test results according to the six levels of the CEFR\(^{19}\), ranging from the lowest (A1) to the highest (C2) level. The DIALANG test procedure includes five stages: 1. Selection of language and skills/aspects; 2. Optional placement exercise; 3. Self assessment; 4. Test; 5. Feedback and advice. The test items are based on multiple-choice, gap-filling (cloze), short-answer questions, drop-down menus and text-entry formats.

DIALANG listening test aims to measure three subskills: 1. Identifying Main Idea/Distinguishing from supporting detail; 2. Inferencing (including lexical inferencing); 3. Listening intensively for specific detail, (see Alderson, 2005:55). The selected recordings are typically 30-60 seconds in length and are verbalized by the speakers who use the standard variety of targeted languages. The texts contain general topics in order to avoid special vocabulary and are based on monologues or dialogues covering various discourse types (e.g. advertisements, travel accounts, news reports, recipes, formal/informal conversations etc.). Test users are usually asked to read questions before listening, after that they are invited to listen to the recording only once and to choose one of the 3-5 options.

Alderson (2005) provides the results obtained from the pilot DIALANG English listening test that are reported quantitatively. In order to gain more insights into L2 listening development, the test-takers’ performance is analyzed with respect to the

\(^{19}\) CEFR is the Common European Framework of Reference for Languages Learning, Teaching and Assessment (see Alderson, 2005: 28).
following variables: listening ability by mother tongue, by sex, by age, by educational level, by length of time learning English, by frequency of use etc. It was revealed that test-takers’ listening ability is positively influenced by the length of time of learning English; the frequency with which they use English; by their level of education; and by mother tongue. It is not sensitive, however, to test-users’ age and sex. In addition, Alderson reports that the learners’ self-assessment of their listening ability matched the results of the DIALANG listening test.

Alderson (2005:153) concludes that “more research is needed into how the different language skills and aspects develop. This is particularly true for listening, which is a relatively unresearched area”. He points out that three listening subskills selected for DIALANG “do not appear to correspond to developments in listening ability, and so future research would do well to explore what variables better predict the development of such an ability” (ibid., 153). As an orientation point, Alderson suggests investigating the relationship between listening ability and the ability to discriminate L2 sounds, the ability to understand L2 stress and intonation, or the ability to deal with native and non-native accents.

Throughout his book, Alderson (2005) emphasizes the current lack of an adequate theory of development in L2 teaching and assessment. He notes that “if researchers, theoreticians and testers do not know how language proficiency develops they can hardly claim to be able to help learners develop such ability” (ibid, p.1). Alderson claims that only the “diagnostic procedures that have general applicability and value based on one-to-one, individualized procedures” (ibid, p.25) can improve our understanding of language development. He explains, however, that:
Without a theory of development, a theory, perhaps also, of failure, and an adequate understanding of what underlies normal development as well as what causes abnormal development or lack of development, adequate diagnosis is unlikely. (Alderson, 2005:25)

It should be pointed out that this kind of developmental theory of learning was proposed by L.S. Vygotsky. This theory includes consideration of what failure is and what promotes developmental failure. Furthermore, Vygotsky’s theory constructed a diagnostic procedure, known as dynamic assessment (DA), which dialectically unifies instruction and assessment into one activity. Theoretically developed and experimentally tested worldwide, DA has proven to be a valuable diagnostic tool primarily in psychological research and later on in educational research, including recent L2 studies, focused on teaching/learning school subjects The theoretical principles and practical implications of DA as well as DA capacity to monitor and promote L2 development will be presented in Chapters 3 and 4.

2.6 Process of listening comprehension vs. product of listening

In recent years, L2 listening research has begun to question the predominance of the product-oriented trend as compared to the process-oriented approach in listening studies and instruction (e.g. Field, 2000, 2007b; Goh, 2002; Buck, 2003, Flowerdew & Miller, 2005, Vandergrift, 2007). Flowerdew and Miller (2005:20), for example, advocate that language instructors “must focus not only on the product of listening but also on the process”. Vandergrift (2007) correspondingly suggests that what is needed now is a research and teaching shift from the product (correct/incorrect answer) to the process of
listening. He warns that “answers may verify comprehension but they reveal nothing about how students arrived at comprehension or, more importantly, how comprehension failed” (ibid., p. 196). In this regard, Field (2000, 2008), Goh (2002), Vandergrift (2007) highlight the importance of research exploring the actual processes of listening through the lens of various pedagogical approaches with the intention to inform instructional practices.

Furthermore, Vandergrift (2007) states that the future L2 listening research should apply mainly qualitative methods in order to gain more insights into comprehension processes not accessible through quantitative methods. He repeatedly highlights the usefulness of such qualitative methods as interviews, questionnaires, concurrent think-aloud protocols and stimulated recalls in that they can enable researchers to find out “what students are attending at and why” while listening to aural texts (ibid., p. 206). Vandergrift (2007: 206) summarizes his discussion on the need of investigation of listening process through qualitative approach as follows:

[…] listening processes are complex and they interact with different knowledge sources, human characteristics and other contextual factors in complex ways. These processes and their interactions need to be explored using in-depth qualitative methods to better understand how L2 listeners attain successful comprehension.

In a similar vein, Buck (2003:15) also acknowledges the complexity of listening comprehension process, and states that “if we want to measure [assess and teach] it, we must understand how that process works.”

In fact, the SCT research has long emphasized the importance of qualitative analysis over the quantitative measurement in diagnosing, interpreting and promoting the
development of individuals’ abilities when assessing those abilities. The present study thus responds to the aforementioned concerns articulated in L2 listening research and adds to the body of knowledge on L2 listening processes and diagnostics by implementing a longitudinal pedagogical study rooted in Dynamic Assessment, a SCT key testing procedure. More specifically, this study seeks to demonstrate some of the insights into L2 listening diagnosis and processes that can be gained when the methodological suggestions from Vygotsky’s writings (1987; 1998) and SCT-based DA research are employed.

2.7 Conclusion

The array of issues addressed in this chapter seeks to analyze the scholarly literature associated with problems of text comprehension and the development of L2 listening assessment practices. The academic publications examined reveal that text comprehension consists in making meaning from the text regardless they see this process as meaning-extracting or meaning-constructing (2.2.1). Text comprehension necessitates fitting the meaning of the text to the existing schema structures based on the individual’s prior knowledge. That is, it is believed that an individual’s interpretation of a text is imbued with his/her “personal history, interests, preconceived ideas, and cultural background” (Omaggio-Hadley, 2000: 148). The examination of recent publications (e.g. Kern, 2000) clearly demonstrates the shift towards social, including socio-cultural, dimensions in L2 cognitive paradigm. As this study evolves within the SCT framework,
the chapter presents a discussion of general SCT considerations concerning text comprehension and examines Vygotsky’s understanding of this problem (2.2.2).

The literature reviewed also demonstrates that L2 research views listening and reading comprehension as complex processes in which bottom-up and/or top-down processing are involved. Yet contemporary developments in this area acknowledge that both of these processes occur concurrently and actively interact with one another. Therefore, current L2 research regards text comprehension as an interactive process entailing the learners’ knowledge of the linguistic code and the learners’ knowledge of the world based on schema structures. Additionally, the chapter presents the cognitive model of listening processing proposed by Flowerdew and Miller (2005) which includes not only the core processing models but also social and cultural factors. The authors of the model claim that these factors may considerably enhance our understanding of the L2 listening comprehension process.

The chapter has chronologically looked at three main approaches to listening assessment. First, the discrete point approach viewed listening comprehension as the ability to recognize one isolated item of the language. The integrative approach then adopted the view of listening as text processing. Finally, the communicative approach moved toward the current view whereby listening comprehension is seen as making inferences. Each of these approaches has contributed in its own way to enhancing the theoretical and practical aspects of listening assessment. Then, the chapter reviewed the L2 literature concerned with the use of comprehension questions that have been in the service of listening assessment for nearly half a century. The review indicated that at present these questions are still widely used to assess listening ability. However, L2
testing research has revealed that despite the apparent ease in devising comprehension questions, they have various downsides. This situation has compelled researchers to alert test-developers and educators to possible problems when the questions are integrated into listening and reading tests.

Another vital matter arising from the discussion above is that recent L2 assessment research has begun to articulate the need for the creation of diagnostic tests anchored in a developmental theory. It is pointed out that “diagnostic testing is virtually ignored in the [L2] literature, and is rarely, if ever, problematized” (Alderson, 2005:10). L2 research emphasizes that diagnostic tests can significantly increase our understanding of language developmental processes and thus to improve language teaching/learning practices, in particular listening instructional practices. In this regard, the dissertation introduces a diagnostic procedure termed Dynamic Assessment which is based on a clear theory of development, i.e. Vygotsky’s sociocultural theory. The next two chapters (chapter3 and chapter 4) provide an overview of theoretical and practical psycho-educational DA studies, including early L2 studies, informed by DA.
Chapter 3

Assessing the Zone of Proximal Development: the Teaching/Learning Experiment

3.1. Introduction

This chapter presents a review of the literature on the concept of the Zone of Proximal Development (ZPD), proposed by L.S. Vygotsky in the early 1930s. More specifically, the chapter considers a number of noteworthy ZPD assessment studies carried out in Russia in the 1960s-2000. These studies have not been translated from Russian into English and, therefore, are most likely unknown to Western academic audiences. First, the chapter scrutinizes the concept of the ZPD as it is presented in Vygotsky’s works (3.2). Next, the chapter reviews an important study on ZPD assessment by Leontiev, Luria and Smirnov (1968), Vygotsky’s prominent colleagues. This publication generated a robust body of ZPD-based psychological research in the Russian academic context (3.3). The remainder of the chapter examines Russian studies that apply a diagnostic procedure known as teaching/learning experiment to assess school children’s ZPD. These studies are guided by theoretical principles advanced by Vygotsky (3.4) and by his influential proponent P. Gal’perin (3.5). These principles stipulate that the inquiry of intellectual development necessitates the exploration of the actual as well as the potential level of development and requires the integration of the concept of the ZPD into assessment design. Additionally, subsection 3.4.5.1 presents a study that investigated ZPD-assessment in an L2 context. Finally, the analysis of available Russian
studies that use the ZPD for diagnosis of adolescent and adult learning is discussed (3.6). The contents of the chapter are summarized in the final section (3.7).

3.2. The Zone of Proximal Development: theoretical foundation

The ZPD is a fundamental concept of sociocultural theory that was pioneered by Vygotsky in the last two years of his life (1932-1934). During this period, his research interests were focused on paedology and he was actively formulating his theoretical understanding of children’s intellectual development. In the early 1930s Vygotsky participated in the revolutionary school reform directed by N.K. Krupskaya, Lenin’s widow, and other leading Soviet educators. In the course of his reform activities, Vygotsky formulated the concept of the ZPD which emerged in the context of a massive project concerned with the assessment of school children (Kinginger, 2002). The introduction of the ZPD into psychology, particularly into educational psychology, provided a basis for a qualitative approach to the assessment and analysis of intellectual development as opposed to a quantitative approach privileging psychometric IQ tests that dominated testing practices at the beginning of the 20th century, and to a large extent continues to dominate the scene at the beginning of the 21st century.

Initially, Vygotsky presented his ideas on children’s mental development and the ZPD in his lectures on paedology at the Leningrad Pedagogical Institute (e.g. Korepanova, 2002; Chaiklin, 2003). These ideas were reflected later in several of

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20 Paedology is the study of children’s behavior and development.
Vygotsky’s works but essentially in his article *The Problem of Age* and his seminal work *Thinking and Speech*, both written in 1934, but published in 1972 and 1934 respectively.

In *The Problem of Age*, Vygotsky introduces the ZPD in order to outline a new approach to diagnosing children’s intellectual development. Vygotsky describes this concept as a principle of scientific diagnostics enabling researchers to gain greater insight into individuals’ intellectual development:

> The theoretical significance of this diagnostic principle consists in that it allows us to penetrate into the internal causal-dynamic and genetic connections that determine the process itself of mental development. (Vygotsky, 1987: 203)

According to Vygotsky, the development of the child involves the appropriation of humans’ cultural experience in collaboration with adults and includes two levels, i.e. actual level and potential level of development. The actual level presumes the child’s independent problem-solving and corresponds to the zone of actual development. The potential level of development presupposes adult-child collaboration during problem-solving activities. These learning activities are intended to reveal the child’s abilities that are in the process of maturation. The potential level is associated with the zone of proximal development and is understood by Vygotsky as:

> the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined by problem-solving under adult guidance or in collaboration with more capable peers. (Vygotsky, 1978: 86)

In other words, for Vygotsky, exploring what the child [the learner] can do independently, one explores the previous or actual level of child’s [learner’s]
development. But exploring what the child [the learner] is able to do with a more-skilled other (e.g. parents, peers, teachers), one can determine the child’s [the learner’s] potential development. Therefore, what the child [the learner] can do now only under the guidance of more skilled others and tomorrow without them, comprises the Zone of Proximal Development, which emerges when the child [the learner] is engaged in a learning activity (Leontiev, 2001).

According to Vygotsky, a genuine diagnostic assessment of development “must be able to catch not only concluded cycles of development … but also those processes that are in the period of maturation” (Vygotsky, 1998: 200). In The Problem of Age, Vygotsky specified that “the determination of the actual level of development is the first and basic task of the diagnostics of development”, whereas the determination of “the processes that have not matured at the time, but are in the period of maturation is the second task of the diagnostics of development. This task is accomplished by finding the zones of proximal development” (Vygotsky, 1998: 200 and 201 respectively, italics added). Although Vygotsky has assigned a secondary role to the ZPD during evaluative activities, in Thinking and Speech he argues for the extreme importance of the ZPD in the organization of instructional practices. He unambiguously states that “the zone of proximal development has more significance for the dynamics of intellectual development and for the success of instruction than does the actual level of development” (Italics added in English translation; Vygotsky, 1987: 209). In this respect, Vygotsky argued that instruction should be adjusted to the learners’ ZPD and not to the actual level of their development.
The methodological principle for diagnosing the ZPD was viewed by Vygotsky as the principle that probes children’s ability to imitate and to collaborate with adults and peers when engaged in a new learning activity (Korepanova, 2002). While discussing the main characteristics of imitation, Vygotsky provided the following explanation:

Speaking of imitation, we do not have in mind mechanical, automatic, thoughtless imitation but sensible imitation based on understanding the imitative carrying out of some intellectual operation… Everything that the child cannot do independently, but which he can be taught or which he can do with direction or cooperation or with the help of leading questions, we will include in the sphere of imitation. (Vygotsky, 1998: 203)

The ability to imitate in collaboration with another was seen by Vygotsky as the major factor that fosters intellectual development. He emphasized that an activity carried out collaboratively enables the child to imitate and, therefore, to develop more than does an activity completed independently. However, in Thinking and Speech, Vygotsky warned that imitation is possible only if an individual can move from what he is able to do to what he is not able to do. He explained that “the child can imitate only what lies within the zone of his own intellectual potential” (Vygotsky, 1987: 209). In this respect, Vygotsky added a supplement to his discussion on the ZPD that elucidated his viewpoint of collaborative learning and imitation:

Our research demonstrates that the child does not solve all unresolved problems with the help of imitation. He advances only up to a certain limit, a limit which differs for different children. […] In collaboration the child solves problems that are proximal to his level of development with relative ease. Further on, however, the difficulty grows. Ultimately, problems become too difficult to resolve even in collaboration. (Vygotsky, 1987: 209-210)
It should be pointed out that Vygotsky was the first scholar who proposed to assess not only the actual level of learners’ development but also their potential developmental level. He gradually articulated theoretical and practical principles concerning his fundamental concept but, due to his early death, he did not concretize the concept of the ZPD fully. Regardless of this fact, many scholars note that his theoretical perspective on the child’s intellectual development through the lens of the ZPD is one of the most significant contributions to psychology and to education of the 20th century (e.g. Leontiev, 2001). However, immediately after his death, Vygotsky was accused of over-enthusiastic interpretations of children’s cognitive development under the umbrella of paedology and was criticized for the lack of theoretical underpinnings in Marx’s works. In the former USSR, this line of research, including Vygotsky’s paedological research, was officially denounced as anti-Marxist and was prohibited according to a special decree On paedological perversions in Narkompros21 Systems issued on July 4th, 1936 (Talyzina, 1986, Vygodskaya and Lifanova, 1996)22. Not until the mid 1950’s could Vygotsky’s followers, such as A.N. Leontiev, Luria, Gal’perin, El’konin etc., restore the value of his cultural-historical theory, known as sociocultural theory in the West. These Soviet scholars recommenced ZPD-oriented research and urged further investigation of the theoretical concepts advanced by Vygotsky.

21 Narkompros or Nar(odnyj) Kom(itet) Pros(veshenia) can be translated as National Committee of State Education.
22 Additionally, the decree denied access to Vygotsky’s publications for ideological reasons and all Vygotsky’s books as well as journals that contained his articles were removed from public and university libraries (Vygodskaya and Lifanova, 1996).
3.3. The Zone of Proximal Development as a diagnostic principle

3.3.1. ZPD assessment research in Russia: the origins

In the 1950s-1960s many SCT-oriented psychologists and educators were concerned with the predominance of psychometric tests that accounted only for the actual level of intellectual development and, therefore, were not able to provide an accurate picture of such development (e.g. Leontiev, Luria, & Smirnov, 1968; Talyzina, 1986; Menchinskaya, 1955\(^{23}\)). Echoing Vygotsky, they argued for the importance of creating psycho-diagnostic tests that could provide more information regarding the prognosis of children’s further intellectual development. However, the development of ZPD-based psycho-diagnostic procedures was re-initiated only in 1968 after the appearance of an influential article written by Leontiev et al. (1968). This article served as an orientation point for this line of research (Talyzina, 1986).

Leontiev et al. (1968) addressed a broad range of issues related to the diagnostic assessment of school children that were failing. They describe five groups of failing learners as identified in clinical psychological research, i.e. (1) mentally retarded children, (2) asthenic children, (3) children with secondary speech underdevelopment, e.g. hard-of-hearing children, (4) psychopathic or emotionally disturbed children and (5) normal children who had difficulties in school and developed negative attitudes towards learning. The authors call for a thorough diagnosis of the source of learners’ cognitive deficits. They propose a diagnostic procedure that consists of three stages:

\(^{23}\) N.A. Menchinskaya (1905-1984), was one of Vygotsky’s students from 1927-1930, and under Vygotsky’s guidance defended a PhD dissertation devoted to the problem of teaching/learning arithmetic among elementary school children.
1. psychological tests for a preliminary assessment of the level of mental development; 2. special clinical-psychological analysis of children’s retardation; and 3. experimental training of unsuccessful learners in special diagnostic classes. They also emphasize the necessity of developing a system for the diagnostic analysis of failing school children and advocate a ZPD-based approach to assessment.

According to Leontiev et al. (1968), psychologists tend to investigate only the children’s actual intellectual development using standardized tests and to negate the diagnosis of the potential level of children’s mental development. They assert that those tests provide substantial but not exhaustive information in order to accurately diagnose the particularities of children’s mental development. In this regard, Leontiev et al. caution that failing learners do not represent a homogeneous group and that the identical results obtained through standardized tests hide the variation in groups of failing school-children and do not reveal different sources of learning difficulties. This crucial fact compels the authors to approach the diagnosis of mental development in a different manner. They point out that the results of clinical psychological studies confirm that the sources of learning difficulties encountered by failing children are not the same and vary from one group to another. For example, mentally retarded children can make only little progress with respect to their intellectual development and necessitate special pedagogical and psychological help, whereas asthenic, hard-of-hearing children or pedagogically neglected children have temporary retardation that could be overcome by means of an appropriate pedagogical intervention and which in turn will foster their intellectual development. Thus, to better diagnose developmental retardation, Leontiev et al. suggest
using a special diagnostic procedure – a teaching/learning experiment - that involves psychological and pedagogical assistance.

The authors note that the foundation of the teaching/learning experiment (TLE, henceforth) was outlined by Vygotsky in the early 1930s. Vygotsky, guided by his understanding of children’s mental development, assumed that usually mental development is actively influenced by instruction and involves the internalization of adults’ cultural experience by the child. For Vygotsky, it is essential that instruction relies on the child’s psychological processes that are maturing and are identified as a result of his/her collaboration with adults. It is for this reason that Vygotsky recommended examining not only the child’s independent performance but also his/her capacity to use adults’ assistance when given different types of problems to solve. In other words, it is necessary to assess not only the actual level of the child’s development using traditional tests but also to test the child’s potential level using TLE tests. According to Leont’ev et al., the TLE tests aim to establish the child’s capacity to learn, the capacity that is tightly linked to the ZPD.

In his works, Vygotsky demonstrated that the ZPD of mentally retarded children is fairly small and for this reason, they have a limited capacity to appropriate assistance. However, this capacity may be quite significant among children with temporary developmental retardation. Within the TLE testing framework, the ability to use adults’ assistance as well as the ability to internalize this assistance and to transfer it to independent problem solving is viewed as a positive diagnostic sign. This sign indicates that given child is not mentally retarded and that an appropriate instructional intervention can help the child overcome temporary mental retardation.
Leont’ev et al. express concern over the lack of studies investigating the ZPD through the TLE with diagnostic purposes. They advance the idea that this approach should be widely implemented in order to refine the diagnosis of unsuccessful learners’ mental development. However, they do not provide the readers with any firmly established ZPD-oriented diagnostic procedure that could be administered during the TLE. They specify, though, that in some cases the procedure used in the TLE can be quite simple and involve only an explicit hint helping the child to solve a problem that he/she has never encountered before. In other cases, the procedure can involve a detailed explanation of the solution and then require the child to transfer this knowledge to the solution of an identical problem.

Leontiev et al. view the TLE as a promising diagnostic framework intended for a more accurate assessment of intellectual development. They explain that this type of assessment necessitates the creation of new diagnostic procedures based on prompting and hints. The authors conclude their article by urging researchers to concentrate their efforts on the development of meticulously designed ZPD-oriented test procedures. As noted by Talyzina (1986), Leontiev et al.’s article generated a series of studies investigating various aspects of the ZPD. Several of these studies are reviewed in the following sections.

3.3.2 ZPD assessment studies in Russia: later developments

Similar to Leontiev et al. (1968), Lubovsky (1989) highly prizes the diagnostic power of the TLE. On the basis of his research, Lubovsky confirms that the assessment of
a child’s ZPD, of his capacity to internalize new knowledge and scientific concepts, provides more insights when it is grounded in TLE. He also notes that these procedures should obligatorily involve specially designed adult assistance in the form of hints, prompts or necessary explanations needed to help the child throughout the assessment process. This special adult assistance is officially termed дозированная помощь [do’zirovannaya ‘pomosh] in Russian psychological research. This term means ‘gradually offered prompts’ or ‘measured assistance’ and can be literally translated as ‘dosed help’ or ‘help provided in doses’. Dozirovannaya pomosh’ is the essential assessment parameter used in TLE-based studies. This parameter prescribes “the quantity of help (offered by the experimenter) necessary for each child to complete the task” (Ivanova, 1976: 18).

The proponents of the TLE include some of Vygotsky’s most famous colleagues, such as A.A. Leontiev, Luria, Smirnov, Gal’perin, El’konin and Davydov. In the decades 1970-2000, these scholars, together with their students, developed two areas of assessment involving the ZPD. The intent of this assessment was to diagnose intellectual development.

The first area of the TLE is rooted in the diagnostic principles proposed by Vygotsky who recommended “assist[ing] each child through demonstration, leading questions, and by introducing the initial elements of the task’s solution’ (Italics added; Vygotsky, 1987: 209). Vygotsky understood leading questions, implicit and explicit hints as a form of adult assistance, and viewed the child’s ability to collaborate during an assessment procedure as well as his/her responsiveness to this assistance as an indication of the child’s ZPD. The second area of the TLE is anchored in Gal’perin’s method of
stage-by-stage action formation (or concept-based teaching). Based on Gal’perin’s method, a number of pedagogical models have been created with the purpose of assessing the ZPD and in so doing finding the ways of enhancing developmental processes. It is beyond the scope of this dissertation, however, to discuss the details of theoretical premises related to Gal’perin’s method. In what follows, a brief overview of his method is presented.

The distinction between theoretical (or scientific) and spontaneous (related to everyday life) concepts is at the heart of sociocultural educational theory. Vygotsky argued that theoretical and spontaneous concepts form a dialectical unity and play an important role in the formation of personality (Vygotsky, 1987). Vygotsky and his proponents regarded instruction as a process organized around concepts that underlie the world (no matter what the school subject is).

Following Vygotsky, Gal’perin (1998) designed and brought into practice the stage-by-stage formation method or concept-based approach to teaching various school subjects. Gal’perin developed the orienting system that ensures from the start correct formation of actions and avoidance of mistakes. In Gal’perin’s method, instruction presents students with the features of reality that are essential to the theoretical content of the particular subject, thus creating an orienting basis of action in the field (initial stages of internalization). Later the process is controlled through stage-by-stage formation of actions. It is assumed that during this process internalization takes place and the orienting basis transforms into knowledge and concepts whereas the very action turns into skills.

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24 More discussion on this method can be found in A.A. Leontiev (2001) and Lantolf and Thorne (2006). In addition, a detailed discussion of Gal’perin’s method in relation to L2 grammar acquisition is presented in Negueruela and Lantolf (2006).
and abilities. This approach involves systematic teaching/learning activities and, according to Lubovsky (1989), enables researchers to identify more accurately the child’s ZPD.

On the basis of theoretical principles and experimental models proposed by Vygotsky and Gal’perin, a series of studies was carried out in order to outline procedures determining the ZPD of abnormal and normal pre-school/school children. These studies applied ZPD-based procedures to the assessment of children’s learning aptitude and to the teaching/learning of different school subjects, including L1 Russian (Juykov, 1971), geometry and mathematics (Talyzina, 1993, 2001, 2002), physics (Kalmykova, 1975, 1981), L2 English (Saburova, 1975) etc. While administrating the TLE, some of these studies have incorporated Gal’perin’s method (e.g. Boorkes de Bastumante, 1978; Nepomniashaya, 1975; Vardanian, 1981) whereas other research has concentrated on Vygotsky’s suggestions (e.g. Ivanova, 1976; Juykov, 1971; Kalmykova, 1975; Saburova, 1975). The two next sections review the most representative and the most frequently cited Russian studies that integrate the ZPD into the diagnosis of normal and abnormal children’s mental development.

3.4. ‘Teaching/learning experiment’: the Vygotskian perspective

3.4.1 Ivanova’s diagnostic method of learning aptitude

Ivanova (1976) used the ZPD in order to diagnose the mental development of normal and mentally handicapped children. The study involved two groups of elementary
school children: 7-9 year-old normal children (50 participants) and 8-9 year-old old abnormal children (50 participants). The participants carried out a series of tasks that varied in terms of the degree of difficulty. Children were asked to sort into groups Koos’s cubes\textsuperscript{25} (or pattern blocks) of different shapes and colors. Using these tasks, Ivanova aimed to diagnose children’s ability to complete such thinking related operations as analysis and synthesis. If a child was not able to solve the problem independently, the experimenter provided the child first with implicit hints and then gradually with more explicit hints, depending on the degree of difficulty encountered by the child.

The method proposed by Ivanova enabled her to identify the sources of children’s learning difficulties through the use of prompts (an adult’s help offered in doses) presented in the form of lesson-hints, leading questions and supplementary tasks. Ivanova used three criteria to determine a child’s mental development: 1) the child’s responsiveness to the researcher’s help; 2) the child’s ability to transfer a new problem solving technique; 3) the child’s orientating ability. These criteria allowed her to identify the child’s ZPD in relation to his/her ability (1) to solve the problem with the help of an adult, (2) to acquire problem-solving techniques provided during the session, and (3) to use a newly acquired technique independently when solving a similar problem.

The method used in this study allowed the researcher to differentiate various forms of anomalies in children.

The results of Ivanova’s study indicate that although the ZPDs of abnormal children are narrower than those of normal children, the leading form of child-adult

\textsuperscript{25} According to Bezrukikh and Loginova (2006), the psychological structure of Koos’ cubes task involves: “Voluntary organization and regulation of activity. Voluntary attention (stability, distribution, and concentration). Constructive thinking. Spatial analysis and synthesis and a schematic notion of space. Visual-motor coordination. The ability to develop new skills” (p. 11).
collaboration in both cases is prompting offered to children in graduated doses. Additionally, Ivanova experimentally proved that the size of the ZPD depends on the child’s aptitude to learn (or learnability). That is, the greater the child’s ability to learn, the more expansive his/her ZPD. Her study considers a child’s aptitude to learn to be the major indicator of the ZPD.

As noted by Lubovsky (1989), the novelty of Ivanova’s method consists in systematization and strict regulation of the order in which pedagogical hints (an adult’s help) are presented. However, Korepanova (2002) opines that this study presents collaboration only as adult assistance gradually offered to a child and does not capture the whole picture of child-adult collaboration. In this respect, Korepanova states that Ivanova’s study does not provide the answer to the following vital questions: what actually happens in the ZPD? How can we measure the ZPD? How does the ZPD transform into the actual level of development? What is the structure of the ZPD? What are the components of the ZPD? In fact, these questions did warrant further investigation and to some extent the answers to these questions are given in the studies considered below.

3.4.2 Belopolskaya’s diagnosis of the ZPD components

In her study Belopolskaya (1997) investigates the psychological components of 300 elementary school children’s ZPD. She argues that the Vygotskyan idea concerning the unity of cognition and affect is also important for understanding the ZPD but has not received appropriate acknowledgment in psychological research. Belopolskaya points out
that while analyzing the ZPD, researchers usually focus their attention only on its cognitive side. Yet, every researcher knows that the results of a particular study depend on the way in which the instruction was presented and on the circumstances in which the study was conducted; e.g. many researchers have confronted situations where participants refused to answer questions.

Following Vygotsky’s idea, Belopolskaya hypothesized that the zone of proximal mental development of a child comprises two variables, cognitive and emotional. In accordance with her hypothesis, Belopolskaya designed activities to check the comprehension of short stories among 6-7 year-old mentally retarded (100 participants), temporarily retarded (100 participants) and normal children (100 participants). In Belopolskaya’s study short stories were presented in three different modes: (1) standard mode (this mode involved regular reading of a story); (2) personified mode (a child was equated to the main character of the story); (3) drama-based mode (the experimenter and a child performed the roles of the main characters).

Three stories of various degrees of complexity were selected for this study. For example, the first and less complex story, entitled ‘Sugar’, was presented as follows:

**I. Standard mode** (first, the experimenter read the story for the child and then asked the child questions):

**Story:** “A boy liked very much to drink tea with sugar. One day his mom gave him a cup of tea and put two cubes of sugar in it. The boy did not want to drink his tea but wanted to take the sugar out of the cup with a spoon and to eat it. However, he could not find sugar in the cup. Then, the boy cried and asked: ‘Who ate my sugar?’”

**Questions:** ‘Who took the sugar?’; ‘Where has the sugar gone?’
II. **Personified mode** (the experimenter presented the story in the following manner):

“One day you, Alex (name of a participant), were drinking tea. Your mom gave you a cup of tea and put two cubes of sugar in it. But you did not want to drink your tea and instead you wanted to take the sugar out of the cup with a spoon and to eat it. However, you could not find the sugar in the cup. So, who took the sugar? Where has the sugar gone?”

III. **Drama-based mode.** In this mode, the child and the experimenter acted out the roles of the main characters.

As noted by Belopolskaya, this type of testing activities allows researchers to unify intellectual and emotional components and is widely used in psycho-diagnostics. To check comprehension of short stories, she create a grading scale divided into five categories: 4 points for independent comprehension; 3 points for partial comprehension or comprehension achieved with emotional help offered by the experimenter (in this case the experimenter supported the child emotionally, e.g. proposed to the child not to be quick, to think carefully and overtly expressed confidence in the child’s success); 2 points for comprehension involving the experimenter’s emotional and rational help (in this case, the experimenter not only encouraged the child emotionally but also asked him/her leading questions); 1 point for story comprehension based on the child’s egocentric point of view (e.g. the child was not able to distinguish between his/her opinion from the opinion of the short stories’ characters); 0 point for silence, refuse or inadequate response.

The results of the study have shown that normal children were able to comprehend the text after regular reading; temporarily retarded children required the
personification of the texts whereas mentally retarded children were only able to understand the short stories through drama-based mode. In this respect, Belopolskaya assumed that the accessible mode of reading comprehension activity reflects children’s actual level of mental development as well as cognitive and emotional aspects of their ZPDs. Personified and drama-based activities enable a child to reconsider his/her personal life experience and lead to the extension of the child’s actual development.

The study demonstrates that accessible instructional presentation, positive motivation provided by the experimenter and the experimenter’s emotional support helped children understand the selected short stories better. Therefore, for Belopolskaya, cognitive and emotional components of children’s ZPD represent an integral part of diagnostic procedure and should be taken into account to diagnose the intellectual development of mentally retarded children. Belopolskaya (1997) concludes that the ZPD is not homogeneous and consists of cognitive and emotional components specifying that the involvement of the emotional component triggers the transformation of the ZPD to the zone of actual development.

3.4.3 Zak’s diagnostic method of school children’s reflection

In accordance with the diagnostic principles advanced by Vygotsky, Zak (1976) examined the formation of reflection among elementary school children through problem solving activities. Following philosophical tradition, Zak defined reflection as self-knowledge. Additionally, Zak’s study was governed by Vygotsky’s idea that “the abstraction and generalization of one’s own thought differs fundamentally from the
abstraction and generalization of things” (Vygotsky, 1987, p. 230). Therefore, guided by Vygotsky’s theoretical premise, Zak understood reflection as intellectual activity constraining an individual to complete a task and then to generalize the principles that underlie the task completion. In his study Zak distinguished between theoretical and empirical problem solution. According to him, the generalization of principles is required only when the problems are solved theoretically. Contrary to empirical problem solutions, theoretical solution compels an individual to analyze formulations of problems in order to establish relationship between substantial features of problems’ formulations.

Zak’s experiment comprised two phases: the first phase was designed in order to determine the actual level of children’s development of reflection; the second phase was intended to determine/diagnose children’s ZPD with respect to the formation of the ability to reflect. During the first phase, children were asked to solve mathematical problems and then to group independently similar and non-similar problems that required a different type of solution. The problems were selected in a way that similar problems and non-similar problems contained identical external features, e.g. identical words. If the child was able to sort the problems according to their content (i.e. on the basis of the problem’s solution), then it was believed that the problem-solving process involved a reflective activity. If the child grouped the problems according to their external features or their formulation, then it was assumed that the child did not use reflection in the course of the problem-solving process. When the activity was not completed correctly, the second phase was implemented during which the child was provided with assistance.

The second phase involved the following five stages of experimenter assistance (depending on the child’s needs). The first stage represented a vague hint in the form of a
leading question (e.g. the experimenter asked the child the following question: Can you identify one problem that is different from the other problems?). During the second stage, the child was asked to repeat problems’ solution verbally. In the third stage the child was asked to repeat problems’ solution in a more concrete manner, i.e. the child was given images or objects that could help him/her to carry out the task. During the fourth stage, the experimenter asked the child to repeat problems’ solution again, to write down the steps he/she made to solve the proposed problems and taught the child in general terms how to write a problem solution down. In the course of the fifth stage, the child was asked to repeat problems’ solution again and to write problems’ solution down using a very specific manner provided by the experimenter. After each stage, the child was asked to group problems independently.

The results of the study demonstrated that the proposed diagnostic procedure allowed Zak to determine the degree of reflection formation among elementary school children. The study revealed that the ZPD is dynamic in nature and that ZPD investigation requires determining its boundaries and its dimensions. Zak assumed that the child’s ZPD of reflection\(^{26}\) might be close to the actual level of development if the child is able to group problems correctly immediately after the first stage of assistance, or might be far from it, depending on the stage at which the child was able to group the problems using reflection. This fact enabled Zak to surmise that the diagnostics for reflection should take into account such ZPD characteristics as its distance from the level of actual development. In order to better determine this distance, Zak suggested integrating less effective adult assistance (along with effective help) into experimental

\(^{26}\) *The ZPD of reflection* is a term used by Zak (1976).
design. However, he did not offer any rationale for the implementation of less effective help. He briefly indicated that, in his view, this type of experimental design would allow researchers to better differentiate the extent to which a mental process is formed.

### 3.4.4 Kalmykova’s diagnosis of productive thinking among school children

Kalmykova and colleagues (1975) conducted a large-scale project in the teaching/learning experiment tradition that focused on learning aptitude in specific school subjects, including physics (Kalmykova), geometry (Zykova) and L2 English (Saburova)\(^\text{27}\). The purpose of Kalmykova and colleagues’ project was to design and to test a ZPD assessment method. The project aimed at the diagnosis of learning aptitude in children 8 to 13 years old. Kalmykova et al. pointed out that intellectual development is a complex phenomenon that integrates many components among which learning aptitude is the most reliable. In addition, Kalmykova et al. considered another component of intellectual development, which is thinking. More specifically they examined productivity, the main feature of thinking. Kalmykova and her colleagues identified productivity as the basis for discovering new knowledge. They claimed that diagnostic methods that intend to test intellectual development should diagnose this very component of mental capacities. The methods should be designed in ways that allow children to

\(^{27}\) The Kalmykova project was carried out at the Laboratory of Education and Intellectual Development, directed by N.A. Menchinskaya. The Laboratory was a unit in the Research Institute of Psychology and Pedagogy at the Academy of Pedagogy (in the former USSR). Its primary research responsibility was to create diagnostic methods that could determine various components of children’s intellectual development. More specifically, the researchers studied the relationship between the teaching/learning process and the intellectual development of school children. They developed and implemented methods that enabled them to identify strong and weak points of learners’ thinking activity as well as their ZPDs. The diagnostic methods designed were intended to lead to interventions and much greater individualization of learning.
observe new phenomena, to draw a conclusion regarding the regularity of these phenomena, to formulate the rule that underlies the observed phenomena, and then to use this rule.

In Kalmykova’s approach, researchers provided hints in order to identify not only learners’ zone of actual development (cognitive functions that have already matured) but also their ZPD, which they identified as an indicator of learners’ potential for future learning in a given content domain. Kalmykova and colleagues did not impose time limits on their testing procedures, and they emphasized the importance of ensuring at the outset that all learners had comparable task-relevant background knowledge as well as a positive attitude towards the assessment. In this way, testers can help to eliminate sources of variance that may disadvantage certain learners. Kalmykova’s group further advocates the use of problem-solving activities that engage learners in observation of new phenomena and that encourage them to draw conclusions regarding the regularity of these phenomena, to formulate explanatory rules that underlie the phenomena, and apply these rules to new problems in different contexts.  

3.4.5 Saburova’s ZPD-assessment in an L2 context

Saburova (1975) was the principle investigator in the portion of the Kalmykova’s project that targeted learners of L2 English. In her study, eleven school children, aged 12-

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28 It is worth noting that this approach to extending learning beyond the initial assessment tasks is also a hallmark of DA methods outside of Russia, namely Brown’s Graduated Prompt Approach (e.g., Brown & Ferrara 1985) where it is referred to as transfer and in Feuerstein’s Mediated Learning Experience (Feuerstein, Rand & Hoffman, 1979) in which it is conceptualized as transcendence. Recently, Poehner (2008) has introduced this feature of DA into applied linguistics.
13 years, were asked to formulate the rule for the formation of present continuous aspect, which is absent from Russian language. The children had already studied the simple present, had learned to conjugate the verb ‘to be’ and to use it as a copula, and had been exposed to some English analytic structures while using verbs in interrogative and negative forms. Nevertheless, the present continuous poses certain challenges to L1 Russian speakers because Russian does not distinguish it from the simple present in the way that English does. In addition, formation of the present continuous in English is relatively complicated, as the ending –ing is a constant element but the auxiliary verb (to be) has different forms depending on person and number of the subject.

Saburova’s TLE comprised three stages termed preliminary, essential, and additional. The preliminary stage involved three kinds of activities. The first of these was intended to minimize lexical errors and involved vocabulary exercises containing lexical items used in subsequent stages. This was followed by a review of previously learned grammar points that are relevant to the formation of the present continuous (e.g., forms of the verb ‘to be’). Finally, the researcher explained the use of present continuous aspect to participants and engaged them in an activity to inductively teach the formation of the present continuous. Working individually, learners were given cards that contained English sentences using the present continuous and were asked to analyze the verb forms and to formulate the rule for the formation of the present continuous. Not all learners were able to do this independently, and so guidance was offered learners as needed in order to be sure that at the end of this stage all participants understood how to form the present continuous.
During the essential stage, the children were given cards containing sentences in Russian. They were first asked to sort the cards according to whether they thought the sentences would be most appropriately rendered in English using the simple present or the present continuous. They were then directed to translate the sentences into English and to explain how they formulated the present continuous when they employed it. The children were allowed to cycle through this stage four times, and it was noted that some learners were able to perform appropriately sooner than others. Those learners who were still unsuccessful after four repetitions proceeded to the additional stage. This stage was devoted to the identification of learners’ ZPDs, interpreted according to the amount of help needed for each learner in order to complete the task independently. Help during this stage consisted of four hints of increasing explicitness, with the last hint being a detailed explanation of how present continuous is formed and used.

Saburova’s analysis noted the differences among learners that emerged at each of the three stages of the procedure. Differences pertaining to learners’ ability to independently formulate the rules during the preliminary stage were particularly successful predictors of future L2 performance. In fact, the data obtained during the completion of this activity allowed Saburova to place learners into three groups, one that required little or no help to identify all formal features of the present continuous and to formulate the underlying rule, a second group that included four children who could partially identify the formal features but were not able to formulate the rule for its use, and a third group consisting of four learners who could not solve the problem independently at all. Saburova concluded that the process of independently formulating
rules that underlie grammatical structures could be an important indicator of children’s L2 learning aptitude.

3.5 ‘Teaching/learning experiment’: Gal’perin’s perspective

3.5.1 Boorkes de Bastumante’s differential diagnostic method of mental retardation

Boorkes de Bastumante (1978)\textsuperscript{29} designed a teaching/diagnostic experiment that involved the use of graduated prompts. In order to diagnose and to correct the mental development of normal, mentally retarded and oligophrenic pre-school children (4-7 year-old), Boorkes de Bastumante grounded her experiment in Gal’perin’s stage-by-stage method of mental action formation. The participants in the study were asked to sort Koos’ cubes (for more details regarding this task: see also Ivanova’s study, section 2.4.1). While administrating this assessment method, Boorkes de Bastumante could (1) identify the source of the problems experienced by participants while completing the task, (2) develop recommendations regarding the type of assistance needed by participants, and (3) determine the most sensitive phases of development during which children are responsive to help. The study design allowed the researcher to evaluate abnormalities and to develop a corrective program for children who participated in the study.

The results of the study showed that normal children internalized the proposed task and could successfully carry it out independently. Mentally retarded children learned how to complete the task at the verbalization level whereas oligophrenic children were able to

\textsuperscript{29} Anhela Boorkes de Bastumante’s PhD dissertation, entitled \textit{Differential diagnostics of mental retardation}, was directed by P. Gal’perin and defended at the College of Psychology of Moscow State University.
carry out the same task at the materialization level. In Boorkes de Bastumante’s view, the major source of the difficulties encountered by mentally retarded and oligophrenic children resides in their poorly developed speaking ability. However, the author points out that these difficulties can be overcome through the meticulous training of a verbal action or the formation of several compensatory skills.

3.5.2 Vardanian’s diagnosis of the ZPD boundaries

Vardanian (1981) argues that the diagnostics of normal children’s development requires the creation of criteria that would allow a more fine-grained differentiation of development. For this reason, it is essential to create diagnostic methods in order to determine the ZPD in a more accurate manner, e.g. determine the most proximal edge of the ZPD. In addition, Vardanian hypothesizes that if children of the same age cannot carry out a particular learning task independently, but can carry out this task under the guidance of an adult, then this fact can be generalized and applied to all children of this age.

The participants of Vardanian’s study were elementary school children (8-9 year-olds). In order to diagnose children’s ability to generalize and to compare, Vardanian used non-verbal Aizenk tests (based on Raven’s matrices30) presented through Gal’perin’s method of stage-by stage formation. The dynamic transition from one stage (or mental action) to another was used as an indicator of children’s intellectual

30 Raven's Progressive Matrices is a multiple choice test used to assess non-verbal intellectual abilities. The test provides insight into individuals’ ability to solve problems and to learn (for more details see: Raven, 1960).
development (i.e. the transition from the materialization stage to the verbalization stage and then the transition from the verbalization stage to the internalization stage).

The results of Vardanian’s studies demonstrate that one group of children was able to pass from one stage to the next stage after having solved 2-3 problems at each stage. This fact allowed Vardanian to assume that the ZPDs of these children are characterized by their ability to carry out the proposed task. The participants of the second group required an extensive period of time in order to be able to internalize the solution of the problems, and for this reason they were provided with necessary adult assistance. Some children from this group could not move quickly from the materialization stage to the verbalization stage and other children could not pass from the verbalization stage to the internalization stage. Vardanian concludes that this fact characterizes their ZPD as the ability to complete the task only at the materialization stage or only at the verbalization stage. The results of the study lead Vardanian to argue for the necessity of reconsidering the term ‘proximal’ in the notion of ‘zone of proximal development’. He claims that the relativity of this notion requires outlining the criteria that would facilitate the differentiation of qualitative changes in normal children’s mental development and the identification of the most proximal boundary of the ZPD.

Vardanian’s (1981) study differs from the studies discussed above in that he advances a conclusory assertion that the diagnosis of normal children should be approached differently from the diagnosis of abnormal children. He agrees that the diagnosis of children’s intellectual development intended to determine their ZPD should be based on the TLE. Interestingly, Vardanian argues that a TLE grounded in Gal’perin’s method should be used with normal children whereas a TLE rooted in Vygotsky’s
suggestions can be used only with mentally retarded or temporary retarded children. In his view, the Vygotskian approach enables researchers and educators to better identify the most successful type of teaching (e.g. hints or explanation) needed for mentally handicapped children. However, the findings of the studies reviewed above and of a set of studies reviewed by Lubovsky (1989) seem to contradict Vardanian’s aforementioned assertion which is not provided with any reasonable explanation or supportive reference. For example, Lubovsky’s review comprises eight TLE-based studies that involved Gal’perin’s method (e.g. Boorkes de Bastumente, 1978) as well as diagnostic procedures that were originally proposed by Vygotsky (e.g. Kalmykova, 1975). According to Lubovsky, both types of teaching/learning experiment were successfully used among mentally handicapped children (e.g. Pinsky, 1968; Ivanova, 1976; Boorkes de Bastumente, 1978) and normal children (e.g. Juykov, 1971; Kalmykova, 1975).

3.6 The ZPD assessment in adolescent and adult learning

The studies addressed above convincingly demonstrate diagnostic values of the TLE. However, one issue seems particularly salient and yet relevant to all of the reviewed ZPD-based Russian investigations. The experimental design of these studies has typically required the participation of elementary school children, and in rare cases of secondary school children (e.g. Kalmykova, 1981). This fact has reinforced an erroneous belief in Russia and in the West that the SCT paradigm is by definition intended to study only these groups of in any population. However, a couple of SCT-oriented studies conducted in Russian and North American educational contexts challenge this belief by providing
counter-evidence regarding the relevance of this theoretical paradigm to adolescent and adult learning. The available Russian research that applies the ZPD assessment to adolescent as well as adult learning is reviewed in this section whereas the North American research is reviewed in the following chapter.

The ZPD is generally understood as a child-focused concept that emphasizes the role of collaborative adult-child interactions in children’s intellectual development. However, many researchers, specifically North Americans, but also including some Russians, maintain that this concept is applicable to learners of any age and ability, including adolescent (Shopina, 2003) and adult learners (Pozina, 2001), or L2 adult learners (e.g. Aljaafreh & Lantolf, 1994; Kinginger, 1998; Lantolf & Poehner, 2004, Poehner, 2005). For example, Pozina (2001) points out that age limit can be extended if one appropriately calibrates a problem that could be solved within the ZPD. She used the concept of the ZPD in adult instruction and proposed to account for the major features of the concept. That is, the ZPD (1) pre-supposes collaborative learning/teaching activities; (2) is individual and is linked to the capacities of a concrete individual; (3) is specific with respect to a subject matter which is amenable to internalization; (4) allows the identification of on-going changes. Pozina states that the role of ‘an adult’ can be assumed by a more skilled other (e.g. instructor, psychologist, consultant), whereas the role of ‘a child’ can be assumed by an individual of any age who needs to learn how to solve a specific problem that corresponds to his/her interest. It is essential that this individual internalizes this new knowledge/activity and uses it in new contexts. The following subsection considers the use of ZPD-based assessment and illustrates it within the context of Shopina’s research with adolescent learners.
3.6.1 Investigating the formation and actualization of the ZPD

Shopina (2003)\(^{31}\) has experimentally investigated psychological particularities of cognitive development among 14-16 year-old normal learners. In order to identify the particularities and actualization of the ZPD, Shopina administered logic problems of various difficulties to adolescent learners. Shopina centered her study on the following design. If the adolescent was able to solve the problem independently, it was assumed that the task was accessible to him and lay within the actual level of his development. If the adolescent encountered difficulties while solving the problem independently, he was provided with help that involved five stages. In Shopina’s view, the inability to complete the task after being presented with the full range of assistance indicated that the task lay outside of the adolescent’s ZPD.

Shopina devised the following five stages of adult assistance. During the first stage, termed *independent position*, the experimenter asked the participant to solve a problem, specifying that he/she also would try to solve this problem. The goal of the experimenter was to carry out the task overtly. For this reason, he/she was “trying” to solve the problem verbally pretending that the participant did not hear his/her words. If the adolescent was able to use this hint and to solve this problem and an analogous problem correctly, Shopina assumed that his/her ability to complete this task was at the intersection of the zone of actual and proximal development. The second stage, termed *equal position*, involved more active adult assistance. The experimenter started to solve

\(^{31}\) Shopina’s PhD dissertation, entitled ‘Psychological regularities of formation and actualization of the zone of proximal development’, was directed by E.Kravtsova and defended at the Vygotsky Psychological Institute, located in Moscow. Professor E. Kravtsova, the granddaughter of Vygotsky, currently assumes the responsibilities of director of this Institute.
the problem and after that proposed to the participant to continue. If the adolescent was still unable to solve the problem, then the experimenter proceeded to third stage. During the third stage, termed *top position*, the experimenter acted as a classical teacher. First, the experimenter explained to the participant how to solve the problem and second, he/she asked the participant to solve an analogous problem. The fourth stage, termed *bottom position*, entailed leading questions asked by the experimenter throughout the problem solving activity. In the course of the fifth stage, the experimenter provided the participant with detailed explanations and they solved the problem together.

During her experiment, Shopina observed different behavior among adolescents and divided them in two groups. One group of participants was able to solve the proposed logic problems in adult-learner collaboration and then solve analogous problems independently. However, these participants could not solve more complex analogous problems even in collaboration. Analyzing the results obtained from this group of participants, Shopina assumed that these adolescents did not achieve substantial changes in their development and their achievements in collaborative problem solving can be viewed only as the result of instruction. The second group of participants was able to solve logic problems collaboratively and then to solve independently not only analogous logic problems but also more complex analogous problems. The results obtained from the second group prompted Shopina to surmise that these adolescents made positive shifts in their development.

In order to confirm these assumptions, Shopina proceeded as follows. To begin with, the participants of the first group were asked to solve complex logic problem with the help of an adult. This allowed Shopina to determine the type of prompting needed for
task completion as well as the level of complexity at which the adolescents were able to solve complex problems. This procedure was intended to identify the lowermost boundary of their ZPD. Then, Shopina proposed more complex problems for the participants to solve. When an adolescent was not able to carry out the task even through maximum adult help, Shopina determined the uppermost boundary of the individual’s ZPD. In other words, the lowermost boundary of the ZPD is determined by Shopina as the minimal level of problem complexity. This level includes complex problems that an adolescent could solve when provided with certain adult help. The uppermost boundary of the ZPD represents the maximum level of problem complexity and comprises problems that can be solved by an adolescent only under maximum adult guidance.

The identification of the lowermost and uppermost boundaries of the ZPD enabled Shopina to establish two ZPD parameters, i.e. external size and internal size. The external size represents the difference between the problems solved by an adolescent independently and the maximal level of complexity of problems solved under adult guidance. The internal size is seen as the difference between the lowermost and uppermost boundaries of the ZPD.

The analysis of the adolescents’ ZPD has shown that the actual developmental level of teenage learners with academic and behavioral difficulties does not qualitatively differ from the actual level of successful teenage learners. However, learners with difficulties have a small external ZPD and, therefore, do not possess the same characteristics of the ZPD compared to successful learners. At the same time Shopina revealed that the difficulties of adolescents do not depend on the actual level of their development. After having examined the cognitive ability of adolescents with different
sizes of external and internal ZPDs, Shopina concluded that (1) the major characteristics of the ZPD are tightly linked to the content of the activity carried out collaboratively as well as to the particularities of learner-adult collaboration; (2) the majority of adolescent learners with difficulties have small external and internal ZPD sizes compared to successful learners. In Shopina’s view, this situation is due to the inability of unsuccessful learners to regulate and control their mental processes, in particular their cognitive processes.

3.7 Conclusion

This chapter contains a review of the psychological studies that explored the assessment of the ZPD among various groups of pre-school children and school learners. The first section (2.2) has addressed Vygotsky’s definition and description of the concept of the ZPD. The review has shown that the ZPD is grounded in the primacy of teaching/learning activities. The ZPD reveals itself in adult-child collaboration and in the child’s capacity to imitate the proposed learning activity. In Vygotsky’s view, it is essential that instruction and above all assessment rely not only on the actual level of the child’s development but also on those intellectual processes that are maturing in the child’s ZPD.

As noted by A.A. Leontiev (2001), Vygotsky’s contribution to psychology is so significant and has so many facets that one can not single out an idea without destroying the integrity of his cultural-historical theoretical conception. Despite its significance, Vygotsky’s work was prohibited for two decades (until Stalin’s death) and only after
more than twenty years of neglect, Russian researchers have begun to investigate the ZPD as a diagnostic principle examining various facets of the concept. The analysis of Russian SCT research has shown that the introduction of the ZPD to psychology and education afforded further opportunities for the advancement of methods of diagnostic assessment. Within the SCT paradigm, the ZPD serves as the leading methodological framework for the diagnosis of children’s intellectual development and for the investigation of individual differences.

The review of Russian studies has shown that the ZPD assessment research can be subdivided into two main categories: studies that followed Vygotsky’s theoretical principles and studies grounded in Gal’perin’s stage-by-stage approach to teaching/learning. These studies, conducted under the umbrella of the TLE, demonstrate that over the last fifty years the SCT framework has outlined specific diagnostic assessment procedures. The diagnostic procedures used in the studies reviewed typically include two phases. During the first phase, the examiners determine the actual level of the participants’ development. This stage usually involves participants’ solo performance. The second stage is intended to identify the participants’ potential level of development and is adjusted to the participants’ ZPD. In this phase, the assessment procedures are obligatorily based on child-adult collaboration and usually include five stages during which an adult [examiner] provides the child [examinee] with graduated assistance. Following Vygotsky’s suggestions, ZPD-oriented research regards child-adult collaboration as the process in which adults assist children. Adult assistance oblige the experimenter to use leading questions, demonstration, modeling and prompting. Within the SCT diagnostic framework, it is believed that this type of interactive intervention
allows the child to achieve more positive results by amplifying the child’s ability to
develop intellectually.

Vygotsky’s work led to decades of ZPD research in Russia before gaining the
attention of psychologists and educators in the West. The next chapter considers Western
psychological as well as educational work, and particularly, L2 work that implemented an
approach known as Dynamic Assessment. This approach, rooted in Vygotsky’s concept
of the Zone of Proximal Development, has been employed by Western scholars in order
to provide more fine-grained diagnostics of learners’ development in ways that parallel
but do not exactly follow those procedures implemented by their Russian counterparts.
Chapter 4

Assessing the Zone of Proximal Development and Learning Potential: Dynamic Assessment in Second Language Learning

4.1. Introduction

The present chapter continues to review psychological and educational research that investigates the assessment of the ZPD (or learning potential), termed Dynamic Assessment (DA) in the West. This research, conducted outside of Russia, was generated by Vygotsky’s theoretical principles and is carried out in line with the teaching/learning experiment (TLE) framework. The DA-based studies build on more than five decades of experience and offer insights into the cognitive development of various groups of learners around the world. This chapter reviews literature on DA with a special focus on L2 theoretical and empirical research situated within this framework. The review begins with a discussion of the general definitions of DA, including a definition of DA offered by early L2 DA research, and discusses the origins and the scope of DA research in the West (4.2). The next part of the chapter (4.3) reviews literature dealing with conceptual aspects of DA grounded in Vygotsky’s sociocultural theory (SCT). The remainder of the chapter provides an overview of the studies discussing the major formats and approaches to DA (4.4). Then, the chapter outlines the differences and similarities between traditional or non-dynamic assessment (NDA) and DA (4.5). Further, the chapter presents the leading DA approaches and includes the comparative analysis of TLE and DA framework (4.6). The final section (4.7) of the chapter discusses the pedagogical
applications of DA to second language teaching/learning and presents early DA studies conducted in L2 contexts. Finally, the literature review is summarized in relation to the present study (4.8).

4.2 Definition and scope of Dynamic Assessment

According to Haywood and Lidz (2007), the last five decades have witnessed an increasing interest in DA among psychologists and educators. Since the early 1960s, a range of approaches to DA has developed in distinct geographical contexts, e.g. in Germany (e.g. Gutke and colleagues), in Denmark, in Israel (e.g. Feuerstein and colleagues) and in the US (e.g. Budoff, Lidz, Haywood, Brown & Campione, Sternberg). To date, a very rough estimation would indicate over 600 psycho-educational studies that follow various theoretical DA approaches (Lidz, personal communication: March 2008\(^{32}\)). As noted by Haywood and Lidz (2007), the hallmark of the studies that fall under the umbrella of DA is an active intervention provided by examiners during the test procedure and the assessment of examinees’ response to intervention. Despite a wide array of current theoretical perspectives that share this type of assessment, many researchers contend that initially DA research was inspired by Vygotsky’s work (e.g. Feuerstein, Rand, Jensen, Kaniel & Tzuriel, 1987; see for review section 4.6) and finds its origins in his concept of the Zone of Proximal Development (e.g. Sternberg & Grigorenko, 2002; Lantolf & Thorne, 2006; Haywood & Lidz, 2007; Bodrova & Leong, 2007). Sternberg and Grigorenko (2002) point out that some of the current DA

\(^{32}\) See also DA studies’ citations at [www.dynamicassessment.com](http://www.dynamicassessment.com).
approaches are drawn directly from SCT, e.g. Campione and Brown; Gühke. Others position themselves as independent approaches to DA (e.g. Feuerstein, Budoff), although they appear to bear resemblance to Vygotsky’s earlier work (Sternberg & Grigorenko, 2002; Lantolf & Thorne, 2006).

The most extensive recent publication on DA written by Haywood and Lidz (2007: 1) define this approach to assessment as follows: “an interactive approach to conducting assessments within the domains of psychology, speech/language, or education that focuses on the ability of the learner to respond to intervention”. In a similar vein, Sternberg and Grigorenko (2002: vii) discuss DA as a form of testing that “takes into account the results of an intervention. In this intervention, the examiner teaches the examinee how to perform better on individual items or on the test as a whole”. These two definitions provide a conceptual footing of the current DA approaches. However, in their attempt to embrace the breadth and scope of DA research, the above definitions fail to specify theoretical profiles of various approaches to DA. For this study, the most relevant area of DA research is DA situated within the Vygotskian tradition. Following theoretical and methodological underpinnings of Vygotsky’s theory, the present study adopts the definition of DA that draws directly from SCT:

Dynamic assessment integrates assessment and instruction into a seamless, unified activity aimed at promoting learner development through appropriate forms of mediation that are sensitive to the individual’s (or in some cases a group’s) current abilities. In essence, DA is a procedure for simultaneously assessing and promoting development that takes account of the individual’s (or group’s) zone of proximal development. (Lantolf & Poehner, 2004: 50)
This definition incorporates such central aspects of SCT as the ZPD, mediation, development and, in so doing, distills a conceptual and theoretical basis for SCT-oriented DA. Each of these central aspects, that all DA studies in this tradition have sought to investigate, is described in the following section.

4.3 SCT-based Dynamic Assessment: theoretical foundation

As described in the previous section, it is generally acknowledged that historically Vygotsky’s theory “appears to have been the first systematic theory of DA” (Sternberg & Grigorenko, 2002:35). This theory explores how social interactions influence human intellectual development and focuses on the social nature of the learning process through the lens of the ZPD. It should be noted that Vygotsky himself did not use the term DA (e.g. Kozulin & Garb, 2002) or teaching/learning experiment (TLE). However, in his works, Vygotsky discussed “the whole range of possible interactive interventions to be used during ZPD assessment, such as asking leading questions, modeling, starting to solve the tasks and asking students to continue but he produced no standardized procedure for the ZPD assessment” (Kozulin & Garb, 2002: 113).

SCT-based DA stems from the key sociocultural concepts, i.e. the ZPD, mediation, and above all, development, which represent a thorough theoretical and psychological basis of collaborative pedagogy and learning-leading-development. Indeed, Vygotsky’s theory addresses many facets related to human development and proposes to view it not only “as the result of lengthy biological evolution”, and “[the result of] very lengthy and complex process of child development” but also as “the product of historical
development” (Luria & Vygotsky, 1993). For Vygotsky, the source of human development resides in the environment that humans actively change and that in turn changes humans (Vygotsky, 1996), and “the natural environment for humans is comprised of society and culture” (Lantolf, 2007a: 32). The development is, therefore, shaped by the sociocultural environment and is sensitive to social interactions to which humans are exposed throughout their lives. Lantolf and Thorne (2006: 27-28) outline this SCT view on development as follows:

Previous research on human mental functioning assumed a unidirectional relationship between humans and nature. Innatist as well as behaviorist approaches see the relationship between human behavior and nature as unidirectional. That is, humans are the way they are either because of their biological make up or because of the environment in which they live. In the former, directionality flows from the brain to the world and in the latter from the world to the brain. The dialectical approach proposes a bidirectionality in which natural endowments form the foundation for thinking; but in the same way a person interacts within socioculturally organized activity and artifacts, elementary functions are transformed and come under the control of the person through use of external, self-generated, but culturally rooted mediation. This is the heart of what cultural-historical psychology would characterize as development.

In other words, SCT understands humans as “fundamentally socially organized entities” (Lantolf, 2007a: 32) who learn to become autonomous by being social. For this reason the SCT paradigm “rejects the encapsulated and autonomous individual privileged in information processing and innatist theories” (Lantolf, 2007a: 32) that do not take account of the fundamental role the sociocultural environment plays in human development. Within the SCT framework, it is argued that the development of humans “is mediated by others, whether they are immediately present as in the case of parents

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From [http://www.marxists.org/archive/vygotsky/works/1930/man/ch01.htm](http://www.marxists.org/archive/vygotsky/works/1930/man/ch01.htm)
guiding children or teachers guiding students, or displaced in time and space, as when we read texts produced by others or participate in activities such as work, organized in specific ways by a culture” (Lantolf, 2007a: 32).

As Lantolf and Thorne (2006) point out, the SCT framework understands mediation as “the process through which humans deploy culturally constructed artifacts, concepts, and activities to regulate (i.e. gain voluntary control over and transform) the material world or their own and each other’s social and mental activity” (p. 79). Thus, from the perspective of SCT, humans do not interact directly with the world and the environment in which they live instead, they use culturally constructed artifacts “created by human culture(s) over time and […] made available to succeeding generations, which can modify these artifacts before passing them on to future generations” (Lantolf, 2000: 1). Culturally constructed artifacts include physical tools (e.g. technology, means of transportation, domestic utensils etc.) and symbolic tools (e.g. literacy, mathematics, language, etc.). Physical tools reinforce the power of humans’ physical bodies whereas symbolic tools, primarily language, amplify humans’ ability “to organize and communicate information and knowledge” while at the same time they “may influence, or regulate in some way, those who are the objects of [their] speaking” (Lantolf & Thorne, 2006: 60). Haywood and Lidz (2007: 42) explain that “mediation is what good teachers and parents do when they promote high levels of mental functioning in their children [and learners]”. Thus, mediation in itself is a simple concept but has tremendous consequences for individuals’ intellectual development, which has its beginning in the ZPD. For this reason, the SCT-oriented DA regards the ZPD as the arena of development
and places the ZPD at the core of teaching/learning as well as socialization processes (Lantolf: personal communication, 2006).

Indeed, as Haywood and Lidz (2007:74) observe, “nowhere in the field of human endeavors is Vygotsky’s concept of the zone of proximal development more relevant than in education.” Vygotsky maintained that the driving motor of intellectual development is learning which creates the ZPD and which in turn triggers internal processes of development. In his writings, Vygotsky repeatedly highlighted the idea that instruction would not be necessary if it were not the source of intellectual development (e.g. Vygotsky, 1986, 1987). He claimed that instruction is good only when it promotes development and when it stimulates a range of functions that are ripening within the ZPD (Vygotsky, 1987) and therefore, instruction should be adjusted to the ZPD rather than to the actual level of development (Vygotsky, 1991). Thus, for Vygotsky and his followers, it has always been important to understand how instruction, a socially constructed phenomenon, influences development; what type of instruction can be considered to be positive instruction; and to what extent instruction might promote development.

Vygotsky’s colleagues and students, e.g. Gal’perin, El’konin, Davydov, A.N. Leont’ev, put forward the idea of Developmental Education which includes such SCT pedagogical approaches to instruction and assessment as concept-based teaching and two evaluative approaches, i.e. TLE and DA. In the view of SCT advocates, TLE and DA dialectically unify instruction and assessment, and, in so doing, enhance learners’ knowledge and enable teachers to promote learners’ intellectual development in various educational environments.

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34 From the course of lectures “Sociocultural Theory and Language Pedagogy”, Fall 2006, The Pennsylvania State University.
settings (e.g. Lubovsky, 1989; Lantolf & Poehner, 2004; Poehner 2005; Duvall, 2008; Ableeva, 2008 etc.).

4.4 DA formats and approaches

4.4.1 DA major formats

Two major formats have been developed over the years to implement DA in psychological and educational experimental settings. Sternberg and Grigorenko (2002) term these DA procedures the Sandwich format and Layer Cake format. They point out that these are not the only possible procedures but rather these are so far the most commonly administered formats, both of which account for the main DA principle grounded in the importance of continuous assistance offered by the examiner during the test procedure.

*The sandwich format*

The sandwich format typically consists of three stages: pre-test → mediation (instruction) → post-test. That is, first test-takers are asked to complete pre-test activities; second, they are given instruction (planned in advance or adjusted to test-takers’ needs derived from their performance during the initial test), and finally, they move on to a series of post-tests. This DA format requires a so-called “sandwiched” instruction because it usually occurs between pre-test and post-test stages throughout the test administration. Within the sandwich format, instruction may be given in individual or group settings and is intended to promote test-takers’ development. The analysis of DA
studies shows that this format has been extensively used in order to design pedagogical interventions in DA research (e.g. Budoff, 1987), including L2 DA research (e.g. Poehner, 2005; Ableeva, 2008). To provide a specific example of ‘sandwich’ DA, this subsection considers a dynamic test proposed by Kozulin and Garb (2002). This study applied a DA procedure for developing L2 English reading comprehension ability among academically at-risk high school students. The design of the study included three stages. During the first (pretest) stage students were given a standard L2 English test used in pre-academic centers at colleges and universities in Israel. The test used by Kozulin and Garb contained six sections that stimulated examinees to use cognitive strategies in order to successfully complete reading comprehension tasks. The results obtained from the pretest stage were analyzed in order to develop precise guidelines allowing teachers to mediate each of the six test sections interactively and “to ensure that mediation was consistent from teacher to teacher” (p. 119). The guidelines developed were used in the course of the second (mediation process) stage. The goal of the mediation process stage was to provide students with appropriate mediation in order to promote their L2 reading development rather than to improve their performance on the pre-test stage.

Unfortunately, Kozulin and Garb’s (2002) study does not include any specific information or hard data exemplifying the forms of mediation that occurred between the teachers and learners during the mediation process stage. The third (re-test) stage involved a test that included items matching the items of the pre-test with respect to information, strategies, length and level of difficulty. The re-test stage was conformed to the requirements of standard tests and was carried out without mediation.
In order to portray participants’ learning potential, Kozulin and Garb (2002) devise a quantitative formula that can mirror “both gain made by the student from pre- to post-test and an absolute achievement score at the post-test” (p. 121). The comparison of pre-test and posttest results indicates that “while the pre- and post-test scores are highly correlated, the gain scores are negatively correlated with the pre-test scores” (p.120). The results of the study demonstrate that students benefited from the mediation offered during the second stage which enabled them to use the acquired strategies while completing text comprehension tasks designed for the posttest stage. It appears, nevertheless, that Kozulin and Garb’s (2002) study is more preoccupied with statistical quantification of the obtained results than with the description of the quality of mediation that, in fact, enabled teachers to promote learners’ development of L2 reading comprehension as determined during the post-test session.

*Layer-cake format*

Within the layer-cake format, assessment comprises intervention (or feedback) from the examiner during the test procedure itself. In this DA format, the examinees carry out testing activities that are given item by item. If they cannot solve an item correctly, they are provided with instruction presented in the form of pre-fabricated hints. As Sternberg and Grigorenko (2002:27) explain it, “the successive hints are presented like successive layers of icing on a cake [and] the number of hints varies across examinees, but not the content of them”. In other words, the examiner provides the examinees with hint-based instruction and determines how many hints an examinee needs to solve the item correctly. The examinees’ ability to learn is measured during the process of learning and feedback is given until the examinees solve the problem or give up, in Sternberg and
Grigorenko’s terms. Furthermore, Sternberg and Grigorenko (2002) note that within the layer cake format the examiner should give a series of gradually complex tasks and after each task he/she should offer examinees necessary feedback and even additional hints if needed.

One representative ‘layer-cake format’-based study is that of Güthke, Heinrich and Caruso (1986). This study is grounded in the ‘item-by-item’ model and was conducted in an L2-like experimental setting. Güthke et al. (1986) developed language aptitude testing activities for the ‘Leipzig Learning Test’. They based these activities on the test instrument originally devised by Güthke (1982) as an instrument that enables testers to measure examinees’ learning aptitude for various subjects. In the study conducted by Güthke et al. (1986) the examinees were asked to carry out a pattern completion task that consisted in pairing geometric figures with words from an artificial language. The DA procedure proposed by Güthke et al. allowed the examiner to provide participants with help implemented in the ‘item-by-item’ format during the test. The procedure acknowledged five pre-fabricated hints: 1. vague hint → 2. more explicit hint → 3. even more explicit hint → 4. a very explicit hint → 5. correct pattern and explanation of the solution. Güthke et al. provided participants first with implicit standardized hints and then gradually with more explicit hints that were planned in advance. It should be noted that the structure of the DA procedure is similar to the structure used in the TLE-based studies reviewed in Chapter 3.

Another study reporting on the use of ‘layer cake’ DA is Sternberg & Grigorenko (2002). Their test represents a foreign language aptitude test based on an artificial language called ‘Ursulu’ “whereby test-takers are tested at the time they learn” (Sternberg & Grigorenko, 2002: 143). The description of the test provides a detailed explanation concerning the linguistic components of the artificial language used in the test. According to Sternberg and Grigorenko, the test is created in order to measure...
4.4.2 Interventionist and Interactionist approaches to DA

L2 research distinguishes two types of DA, i.e. Interventionist and Interactionist (e.g. Lantolf & Poehner, 2004), acknowledging that the most important proponents of these two orientations are M. Budoff and R. Feuerstein respectively\(^{36}\). Lantolf and Poehner (2004) characterize the interventionist approach to DA as a more formal and standardized approach, concerned with psychometric properties of test procedures. In their view, interventionist DA encompasses studies that devise and implement a pre-determined list of hints followed rigidly during assessment activities in order to generate a weighted score. Interventionist DA finds its origins in Vygotsky’s early work on the use of IQ testing in school settings that includes “quantitative interpretation of the ZPD as a ‘difference score’” (Poehner & Lantolf, 2005). According to Poehner and Lantolf (2005), the interventionist DA is currently applied in two formats: an ‘item-by-item’ approach (or layer-cake format) during which mediation is based on a prefabricated menu of hints and a pretest-treatment-posttest (or sandwich format) experimental approach (e.g. Budoff’s approach to DA, see 4.6.3).

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\(^{36}\) For review of Budoff’s and Feuerstein’s research see sections 4.6.3 and 4.6.4.
The interactionist approach to DA implies mediation emerging from interaction between examiner and examinee. This type of DA represents dialogic or cooperative interaction (Poehner 2005), in which the examiner immediately reacts to the examinee’s needs, and learners are allowed to pose questions and receive immediate feedback. During interactionist DA sessions, leading questions, hints or prompts are not planned in advance and teacher-learner interactions are fine-tuned to the learner’s ZPD. To illustrate the use of interactionist approach to DA in L2 contexts, this chapter considers Antón’s (2003, 2009) and Poehner’s (2005) studies (see 4.7.1 and 4.7.2). The discussion of both studies are particularly relevant here since the DA approach used in the present study follows Antón’s and Poehner’s suggestions concerning the usage of DA among L2 adult learners in collegiate settings.

4.5 DA and NDA: outlining differences and similarities

At the outset of their discussion concerning the differences between dynamic and traditional assessment (or non-dynamic assessment: NDA), Sternberg and Grigorenko (2002) pinpoint that NDA tests can include dynamic features and similarly dynamic tests can include some static features as well. For example, the pretest-mediation-posttest DA format usually includes NDA elements administered throughout the pretest stage. Additionally, there have been some DA studies that have incorporated such NDA assessment instruments as multiple-choice questions (e.g. Sternberg and Grigorenko’s (2002) language test); Budoff and his group as well as Feuerstein and colleagues created dynamic adaptations of such standardized tests as Kohs Learning Potential Task, Picture
Word Game (e.g. Budoff, 1987) or Raven’s Colored and Standard Progressive Matrices, the Rey-Osterrith Complex Figure Test (e.g. Feuerstein, Rand & Rynders, 1988).

According to Sternberg and Grigorenko (2002:28-29), DA can be distinguished from NDA in three ways. In terms of assessment goals, NDA focuses on “products formed as a result of preexisting skills.” At the level of assessment administration, the non-dynamic paradigm does not permit “feedback from examiner to test-taker regarding quality of performance” during the test procedure. Finally, with regard to the examiner’s orientation in NDA, it is important “to be as neutral and as uninvolved as possible toward the examinee.”

From these three angles, DA contrasts sharply with NDA. First of all, from a DA perspective, there is no necessity to assess content as well as abilities that are already mastered by learners. In a similar vein, there is no need to test abilities that are not formed yet or to test content that surpasses learners’ current knowledge and, therefore, to generate frustration and to “create problems with motivation and perseverance” (Haywood & Lidz, 2007:43). Second, in DA, assessment and instruction are not separate activities. For this reason, within DA, the tested abilities and the content used for pretest and posttest activities should be in the zone of proximal development and, therefore, teachers’ task consists in finding and/or creating learners’ ZPDs. To do this, DA-based activities require teacher/learners mediation involving instruction and continuous feedback. Finally, DA rejects the teacher’s neutral or disinterested stance during the test administration. Quite on the contrary, DA requires a teacher to be involved and to function “as a mediator who reacts to learners’ responsiveness” (Lantolf & Poehner,
2004: 59). Similarly, while describing practical guidelines for administrating DA, Haywood and Lidz (2007: 41) state that:

With DA we [teachers] are not neutral, and we do mess with the test and the learner in order to find routes to move the learner to the next level of development. We have to create a “process” so that we can see how the learner learns and how we can promote increased competence. To do this, we must first create collaboration between the assessor and the referred individual and place the individual in the position of active participant in the assessment process. To do this, we have to make our thinking as explicit as possible.

Another vital matter discussed in DA literature has to do with the constructs of reliability and validity, two pivotal measuring instruments of conventional psychometric diagnostics (e.g. Talyzina, 1986; Feuerstein et al. 1987; Poehner, 2005; Lantolf & Poehner, 2007; Haywood & Lidz, 2007). While discussing the problem of stability of cognitive functions selected for diagnosis, Talyzina (1986) points out that these functions are not stable and are amenable to changes. These changes can occur not only as a result of instruction but also as a result of the completion of test activities. Therefore, by recognizing changeability (or modifiability, in Feuerstein’s terms) of cognitive functions, one casts doubt on such fundamental psychometric test requirements as reliability. From the psychometric perspective, a test can be reliable only if this particular test constantly produces identical (or replicable) results when used with various groups of participants. In this regard, Talyzina (1986: 19) remarks that if the functions selected for measurement are not stable, then the results obtained throughout the test replication also cannot be
stable and, therefore, can lead to erroneous diagnosis reflecting the behavior of participants which occurred in this particular test situation.

In a similar vein, Talyzina challenges the widely accepted view of the validity construct. She stresses that a diagnosis, grounded in the zone of actual development, can fail to produce valid results if the targeted cognitive functions of a test-taker are in his/her zone of proximal development. Therefore, such cognitive functions can be identified and, consequently, formed only by means of appropriate mediation (instruction) and in so doing will allow the test-taker to successfully complete the test activities, but only with appropriate mediation.

Along the same lines, Lantolf (personal communication: 2006) raises the issue of commensurability between the pivotal psychometric constructs and DA. He emphasizes that reliability and validity are built upon the concept of an autonomous learner whereas DA views a learner as an individual involved in social interactions intended to promote his/her development. Therefore, DA presumes mediated teacher-learner negotiation during the test procedure, and for this reason, DA does not fit well psychometric principles. Because a test should be consistent with the theory and because DA constantly foregrounds a learner’s improvement, DA’s validity construct would be development which implies a social relationship. Moreover, if development does not happen, then DA’s validity would be compromised. With regard to reliability, Lantolf notes that DA requires the test to be the source of change leading to development and if DA does not promote development, then it cannot be considered reliable.

Feuerstein et al. (1987), Jensen and Feuerstein (1987) compare and juxtapose conventional psychometric tests and DA approaches. They observe that standardized tests
and DA share the same need to assess cognitive functioning of individuals. Unlike psychometric tests, however, DA discards the static application of test procedures entailing “immutability and predictability” and declines to use test results for purposes of comparison and classification which “contribute reliably to the discrimination among respondents” (Jensen & Feuerstein, 1987: 390). Additionally, Feuerstein et al. (1987) emphasize that DA is a process-oriented testing paradigm rather than product-oriented. In DA, the test procedure is grounded in mediation, a pivotal parameter of the approach, and seeks to assess “fluid processes” and in so doing “permits close observation of the cognitive behavior of the examinee” (Feuerstein et al., 1987:45). Feuerstein et al. underscore the common conceptual orientation of all DA approaches as “the need to go beyond the tasks and the products of the examinees” (ibid., p.51).

To sum up, in a dynamic approach, the focus is on learners’ emergent (i.e., dynamic) abilities; the assessment is inseparable from instruction, and the learners are continuously mediated during the test procedure because a DA-oriented examiner “is more concerned with cognitive transformation than with performance efficiency” (Lantolf and Poehner, 2004: 59). In DA, the examiner and the examinee have the same goal and represent a functional system, a unit where all parts work together (Lantolf and Poehner, ibid.).
4.6 Dynamic assessment approaches: current developments

4.6.1 Dynamic assessment: major approaches

Sternberg and Grigorenko (2002) identify and review six major approaches to DA, whereas Haywood and Lidz (2007) extend this list by adding three DA approaches and summarize them according to Sternberg and Grigorenko’s characterization and Haywood’s classification. The list of nine DA approaches outlined by Haywood and Lidz (2007) is reproduced in Figure 4-1 below.

Figure 4-1 demonstrates that Haywood and Lidz’s classification includes approaches that currently dominate DA research developed by Western scholars. As discussed earlier, the present study considers TLE as an area of diagnostic assessment research important for understanding DA investigations. TLE was first introduced in the West by A.R. Luria, one of Vygotsky’s influential colleagues. In 1961 Luria presented a study on current assessment practices at a conference of the American Orthopsychiatric Association. This study was concerned with the inability of the quantitative or, in Luria’s terms, ‘statistical’ testing to accurately assess children’s learning disabilities. The study called for the use of TLE - a qualitative method grounded in the ZPD assessment - labeled by Luria as ‘dynamic’ assessment’ (see also chapter 3 for review of Leontiev, Luria & Smirnov, 1968).
As discussed in chapter 3, the theoretical underpinnings of TLE are rooted in the psychological research by Vygotsky and Gal’perin (Lubovsky, 1989). Even though within the TLE paradigm researchers have somewhat varying views on implementation of TLE, this assessment approach reflects Vygotsky’s premise that every inner function

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<tr>
<th>Sternberg and Grigorenko’s Characterization</th>
<th>Haywood’s categories</th>
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<td></td>
<td>Restructuring the test situation</td>
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<tr>
<td>Structural Cognitive Modifiability (Feuerstein et al.)</td>
<td>x</td>
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<tr>
<td>Learning Potential Testing (Budoff et al.)</td>
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<tr>
<td>Graduated Prompt (Campione and Brown)</td>
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<td><em>Lerntest</em> (Guthke, Hamers, Hessels, Ruijssevanaars, et al.)</td>
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<td>Testing the Limits (Carlson and Wiedl)</td>
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<td>Information Processing (Swanson, Das, Naglieri et al.)</td>
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<tr>
<td><strong>Approaches Not Charted by Sternberg and Grigorenko’s</strong></td>
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<tr>
<td>Curriculum-based DA (Lidz)</td>
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<td>Stimulus Enrichment (Haywood)</td>
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<td>DA of Young children (Tzuriel)</td>
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Figure 4-1: Classification of approaches to dynamic assessment according to two classification schemes, (Haywood & Lidz, 2007: 17).
first appears on the intermental level and then on the intramental one (Zimnaya, 2004). Summarizing psychodiagnostic research in Russia, Talyzina (1986) notes that TLE is not built as an accommodation to the existing level of development in learners/examinees but as an employment of the means that form in learners new abilities necessary for full internalization of the learning materials used during the assessment procedures. Talyzina (1986) contends that Russian psychologists regard the abilities of an individual as the product of social interactions formed during one’s lifetime. She highlights that the formation of new abilities is grounded in learning, which in turn promotes development and creates novel ZPDs. In her view, this kind of approach to cognitive development opens the door to the assessment of maturating abilities. Therefore, the aim of the TLE diagnostic component is to look at the cognitive functions that are in the process of formation and to create conditions for the genesis of various cognitive neo-formations.

Additionally, TLE does not simply focus on assessment of how well the material is internalized by learners, but mainly on whether and how development takes place. That is, from the TLE perspective, the internalization of learning material is complete when this newly acquired material surfaces in other contexts. In this sense performance within the ZPD differs from scaffolding, which represents assisted performance, not anchored in such important criterion for development as recontextualization. The next subsection discusses the theoretical premises and principles that underlie DA and TLE as an assessment paradigm.
4.6.2 TLE and DA

First of all, it should be emphasized that although a number of leading DA approaches are not directly derived from Vygotsky’s theory (e.g. Feuerstein, Budoff), the approaches within the scope of DA discussed in this section are clearly not separate models. TLE and DA have one common trait: they employ dynamic testing procedures to assess the learning potential of examinees. Haywood and Lidz (2007: 321) define learning potential as “the capacity to learn more effectively than was either demonstrated by present performance or predicted by standardized tests of intelligence”.

Second, TLE and DA approaches share the idea that the insights into examinees’ capacity for learning can be revealed only through mediated assistance rather than through independent performance on tests. According to Haywood and Lidz (2007: 321), even if this idea was intensely debated in philosophical and psychological research, it was first articulated “in a more or less scientific fashion by Vygotsky, who introduced the notion of a zone of proximal development”. As a result, the fundamental principle of TLE and DA is based on the notion of collaboration or mediation between an examinee and examiner/peers. For this reason, TLE and DA see problem solving as a phenomenon that initially exists as a collective division-of-labor activity which is later internalized by the learner. Thus, in spite of any theoretical differences, TLE and DA share the same understanding of learning as interiorization of social activity by individuals and view the mediation as “the psychological component of cultural transmission” (Feurstein et al., 1981:271; cited in Lantolf & Poehner, 2004:58). Similarly to TLE, the clinical approaches to DA, such as the SCT-oriented DA (e.g. Campione, Brown, Ferrera
Bryant, 1984) or Feuerstein’s approach argue that learning goes through mediation and learners internalize the mediation that can appear later in other contexts throughout their lives.

Finally, in TLE and DA examinees learn not simply the learning material taught by the examiner/teacher but the models of thinking, communication, and activity as demonstrated by the teacher and peers. In TLE/DA settings examinees learn from the examiner or each other, build upon each other’s ideas, and find new ways of collaboration. In the course of testing/instructional activities learners perform many tasks and operations intended to determine the most effective method of problem solving, understanding, mastery and internalization of such a method. In this regard Bodrova and Leong (2007) note that in essence the goal of DA procedures is to measure a feature that reflects examinees’ ability “to benefit from adult assistance that is domain independent. Russian [psychologists and] educators use the term obuchaemost’ [educability] to describe this domain-independent characteristic; Feuerstein uses the term cognitive modifiability” (p. 199, italics in the original).

Thus, the above discussed theoretical bases demonstrate that TLE and DA share a similar understanding of the interrelationship between testing/instructional activities and the development of cognitive functions. Given the common conceptual base and the relevance of such SCT concepts as the ZPD and collaboration (or mediation) to TLE and to a number of DA approaches, the present study proposes to expand Haywood and Lidz’s classification by integrating into it TLE. The revised list of these approaches is presented in Figure 4-2 below.
The dominant DA approaches presented in this section have been created over time and gradually gained scientific credibility and methodological depth. However, it is generally recognized that approaches proposed by Budoff and Feuerstein currently represent two leading DA approaches in the West. The main features of Budoff’s approach are briefly introduced in the next subsection whereas Feuerstein’s approach, which has been partially adopted for the design of the present study, is considered in more detail in subsection 4.6.4.

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<th>Approach</th>
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<td>1)</td>
<td>Teaching/Learning Experiment</td>
<td>Leont’ev, Luria and Smirnov1</td>
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<tr>
<td>2)</td>
<td>Structural Cognitive Modifiability</td>
<td>Feuerstein et al.</td>
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<tr>
<td>3)</td>
<td>Learning Potential Testing</td>
<td>Budoff et al.</td>
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<td>4)</td>
<td>Graduated Prompt</td>
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<td>9)</td>
<td>Stimulus Enrichment</td>
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<td>10)</td>
<td>DA of Young children</td>
<td>Tzuriel</td>
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Figure 4-2: Dynamic Approaches of Learning Potential.
4.6.3 Budoff’s contributions to DA research

Budoff and his research team offered their conception of DA in the early 1960s. Budoff and Friedman (1964) expressed concern over misclassification of lower IQ scores among children from minority groups. They argued that the children from non-middle class families do not have the same pre-school preparation as their chronological-age peers from a middle class milieu. Budoff’s DA model, termed ‘learning potential assessment’ (LPA), was born out of the dissatisfaction with “the shortcomings of the IQ tests as a measure of intelligence among children from non-middle-class and/or non-Western backgrounds” (Budoff, 1987:52). For this reason, Budoff and colleagues were interested in developing an alternative assessment of cognitive functioning and designed a particular model to assess learning potential of low-IQ children.

The LPA model proposed is comprised of three stages: test – train - retest. Budoff’s approach is in stark contrast to the traditional assessment because in addition to assessing the child’s independent performance during the test, LPA includes a training stage. During the first stage, LPA follows a traditional assessment format and requires children to solve the problems independently. The second stage involves training and is conducted dynamically. The training is intended to offer problem-relevant training and to teach children how to solve these problems in a group or individually. During the third stage children are asked to complete re-testing activities.

LPA was implemented in a number of experimental studies intended to develop dynamic versions of such standardized tests as Raven Learning Potential Procedure (e.g. Corman & Budoff, 1973) and Kohs Learning Potential Test (e.g. Budoff & Corman,
Unlike many other DA developers, Budoff and colleagues devised a procedure in order to classify mentally and culturally disadvantaged children on the basis of the results obtained through LPA. According to Budoff (1987), the early LPA studies sought to classify test-takers as high scorers, gainers and non-gainers, whereas later LPA research grouped examinees’ test results into three categories: *pre-training scores, post-training scores* and *post-training score adjusted for pre-test level*. The pre-training scores indicate the child’s ability to perform on the task independently. This category also accounts for such socioeconomic factors “as size of family, degree of intactness of family, race (black, white) and English language competence” (Budoff, 1987:59). The second category includes three components: (1) test-takers’ initial level displayed during the pretest; (2) the effects of repeated exposure to the test materials; (3) the effect of training on the examinees’ test results. The third category reflects children’s “responsiveness to training and […] it is hypothesized to indicate the student’s amenability to instruction” (Budoff, 1987: 60).

In sum, LPA represents a quantitative approach to DA, the primary goal of which is to combine standardized and dynamic testing. In this regard, Budoff and colleagues aimed to standardize the second stage of the LPA model which comprises the training component, carried out dynamically. Budoff and colleagues have also sought to determine the reliability of the test procedure and its items as well as “to demonstrate the validity of training-based assessment” (Budoff, 1987:57). As noted by Poehner (2005), this quantitative orientation is quite understandable because LPA has been intended to improve examinees’ performance on standardized tests with specific populations of low-IQ children, and, despite certain limitations (see Sternberg and Grigorenko, 2002 for
review and analysis of LPA), Budoff’s model “has left an important mark on DA research” (Poehner, 2005:50).

4.6.4 Feuerstein’s contributions to DA research

In the 1970s Feuerstein advanced the theory of Structural Cognitive Modifiability (SCM) with the intention to optimize the existing assessment measures of learning potential rooted in conventional IQ tests. It should be first noted, however, that a number of DA researchers have observed a striking resemblance between Feuerstein’s and Vygotsky’s key theoretical concepts (e.g. Sternberg & Grigorenko, 2002; Poehner, 2005; Lantolf & Thorne, 2006)\(^{37}\). Although Feuerstein and his team developed SCM theory independently\(^{38}\), Feuerstein, Rand, Jensen, Kaniel and Tzuriel (1987: 48) do, however, acknowledge that:

Vygotsky (1978), in suggesting the use of a dynamic approach, formulated this particular aspect of change by urging those who evaluate children to see to what extent the assessed child is able to do alone the next day what he or she was able to do during the assessment with the help of the adult. Vygotsky considered this to be the major way to assess the child’s capacity, and it is with this particular thought that Vygotsky opened the era of dynamic assessment. (Italics added).

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\(^{37}\) See Poehner (2005) for a detailed discussion on the similarities and differences between Vygotsky’s and Feuerstein’s theories.

\(^{38}\) Feuerstein and colleagues have been aware of Vygotsky’s work and his theoretical influence on the development of DA research. For example, Feuerstein, Rand and Hoffman (1979) mention *Thought and Language* (Vygotsky, 1962) whereas Feuerstein, Rand, Jensen, Kaniel and Tzuriel (1987) refer to two of Vygotsky’s books *Thought and Language* and *Mind in Society* (1978).
Feuerstein et al. (1987: 35) also admit that “despite the fact that as a philosophy, it [dynamic assessment] has been with us for awhile (Cronbach & Furby, 1970; Vygotsky, 1934/1962). As a technique, however, it has not, as yet, found full acceptance”.

Recognizing the theoretical contributions and the empirical robustness of Feuerstein and colleagues’ DA research, Poehner (2005:59) proposes to view their research as “a continuation of the defectology work begun by Vygotsky and Luria more than seventy years ago”. The present study thus responds to Poehner’s observation and sees Feuerstein’s approach, including all leading DA approaches developed since the 1960s (see Table 4-1), as a valuable extension of theoretical premises and practical inquiry pioneered by Vygotsky and Luria, whose work was intensely concerned with the creation of testing models that would influence and promote the cognitive development of disadvantaged or special-education individuals.

4.6.4.1 The theory of Structural Cognitive Modifiability and Mediated Learning Experience

Like many TLE and DA advocates (e.g. Talyzina, 1986; Budoff, 1987), elsewhere Feuerstein and his team express their dissatisfaction with conventional (non-dynamic) testing practices and adhere to the common goal of DA which consists in “enhancing and modifying the functioning of the individual in an area considered critical at a particular point in the assessment” (Feuerstein, Rand, Jensen, Kaniel & Tzuriel, 1987: 42). Unlike Budoff, however, Feuerstein and his team reject a quantitative approach and opt for a qualitative implementation of DA. In this regard, Feuerstein et al. (1987) distinguish functional DA and structural DA, grounded in the theory of Structural Cognitive
Modifiability (SCM). According to Feuerstein et al. (1987: 42), the goal of functional DA “is limited to the enhancement of the individual’s functioning as it relates to interaction with the specific psychometric task”. For this reason, they argue against functional DA which, in their view, includes Budoff’s model\(^{39}\) and the models that “aimed at facilitating the individual’s functioning in the proximal zone of his or her potential\(^{40}\)” (ibid., p. 42).

Feuerstein et al. (1987) argue in favor of structural DA and define its goal as follows: “Here, the goal of change to be produced in the assessed individual goes far beyond immediate levels of functioning into the search for changes in the very structural nature of the cognitive processes that directly determine cognitive functioning in more than one area of mental activity” (p. 42-43). Following this definition of DA, the SCM theory stipulates that “the individual is an open system susceptible to influences that can produce structural changes in cognitive functioning” (Jensen & Feuerstein, 1987: 380).

The SCM theory has argued that a universal modality of learning includes two components. According to Jensen and Feuerstein (1987), the first component accounts for the direct exposure of the individual to sources and stimuli that individuals encounter in a “fragmented, disassociated and even random fashion” throughout their life. This modality of learning cannot consider “the observed differences in intellective functioning” or cultural phenomena. The second component is Mediated Learning Experiences (MLE) that SCM views as its underlying modality of learning. This theory assumes that “the crucial determinant of the development in humans of higher levels of cognitive

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\(^{39}\) Feuerstein et al. (1987:42) view Budoff’s LPA as a DA approach that “sets limits to the quantity and quality of changes that are the target of the intervention”. They believe that Budoff’s test-train-retest model is “restricted by the nature of the first “test” and the second retest” and that this model can embrace only one specific aspect of the individual’s functioning targeted for change (ibid.).

\(^{40}\) Feuerstein et al. (1987) do not provide any example, however, exemplifying a model drawn on the ZPD that incorporates psychometric tasks.
functioning depends upon the growing child’s opportunity to benefit from mediated learning experiences” (Jensen & Feuerstein, 1987:380).

Feuerstein and his colleagues have claimed that adequate cognitive development can occur only through adequate Mediated Learning Experiences (MLE) which can be provided only by experienced mediators (teachers). According to Tzuriel and Klein (1987), the MLE-oriented examiners interpose themselves between the child and the world and deliberately structure and broaden the child’s learning experiences. They explain that an adequate MLE requires the mediators to ‘filter, select, organize’ and transform learning material in way that will allow the examinee to process it meaningfully. Additionally, an adequate MLE can involve “the teaching of abstract rules and higher order mental strategies for problem solving” (Tzuriel & Klein, 1987:268).

Feuerstein, Feuerstein, Falik and Rand (2002) outline twelve MLE components and divide them into two categories: (1) the Universal Parameters of Mediation and (2) the Situation-Specific Parameters of Mediation. They highlight the importance of the first category, specifying that all meditational interactions are characterized by the three Universal Parameters (see below). The components of the second category include nine parameters and are richly described by Feuerstein et al. (2002). The Situation-Specific Parameters of Mediation are employed by the mediators depending on the special needs of the examinees, the situation and the specific conditions of life and culture. Given the critical importance of the first category, the remainder of this section considers the three Universal Parameters of Mediation as parameters particularly relevant to the present study.
The Universal Parameters of Mediation are *intentionality-reciprocity*, *transcendence* and *mediation of meaning*. *Intentionality* is defined as the mediator’s intent to modify the examinee’s cognitive functioning through “a quality of interaction, while solving a given task, transmitting information or teaching a skill” (Feuerstein et al., 2002: 76). *Reciprocity* is understood as the examinee’s responsiveness to the mediator’s intentionality. That is, the examinee’s ability to respond to the mediator’s intentionality enables the latter to determine the amount and the quality of mediation needed to produce positive cognitive changes in the examinee’s performance. *Transcendence* is associated with “the widening of interaction beyond its immediate goals to other goals that are more remote in time and space” (ibid., p. 76). *Mediation of meaning* is viewed as “the emotional, affective, energetic component of the interaction” (ibid., p. 77). This universal parameter allows the mediator first to explicitly expose the examinee to all necessary testing materials (e.g. stimuli, concepts, rules). Second, mediation of meaning stimulates the examinee’s necessity “to search for meaning in the broader sense of the word” (ibid., p. 77) and in so doing gives rise to new positive changes in the examinee’s cognitive functioning.

To expose examinees to adequate MLE, the SCM paradigm prescribes the mediators to administer the Learning Potential Assessment Device (LPAD) and then to engage examinees in the Instrumental Enrichment (IE) program, if needed. The LPAD instruments and IE program plan are discussed in the next subsection.
4.6.4.2 Learning Potential Assessment Device and Instrumental Enrichment Program

Feuerstein et al. (1987:43) state that the goal of the LPAD is “to modify the cognitive style characteristics of an individual”. More specifically, the LPAD seeks “to produce … [structural] changes in the samples of behavior emitted by the individual during the assessment” (ibid., p.45). To reach this goal, LPAD attempts to identify and to eliminate the source of the problems that cause obstacles and impede examinee’s successful performance during the assessment procedure (Jensen & Feuerstein, 1987).

As noted by Feuerstein and his associates elsewhere, the target populations of the LPAD are individuals with special needs or retarded performers. Therefore, the mediators working within the LPAD must structure the examiner-examinee relationship in such a way that it enables them to identify “as precisely as possible (a) what the specific [cognitive] deficiencies are, and (b) the amount and nature of the investment that may have to be offered to the examinee to overcome them” (Jensen & Feuerstein, 1987: 384-385). Additionally, Feuerstein et al. (2002) emphasize that the LPAD test administration is a process-oriented procedure, as opposed to product-oriented testing approaches.

Since 1979 (see Feuerstein et al., 1979), Feuerstein and his associates have developed a battery of the 15 LPAD instruments, the majority of which represent a dynamic version of several well-known conventional tests. Feuerstein et al. (2002: 192-220) divide the LPAD battery of tests into four large categories. The first category focuses on visual motor and perceptual organization and includes four tests: (1) Organization of Dots; (2) Complex Figure Drawing Tests; (3) Diffuse Attention Test; (4) Reversal test. The second category focuses on memory, with a learning component, and
comprises the following four tests: (5) Positional Learning Test; (6) Plateaux Test; (7) Associative recall: Functional reduction and Part-Whole; (8) 16 Word memory tests. The third category involves various cognitive processes and mental operations and consists of five instruments: (9) Tri-Modal Analogies; (10) LPAD Matrices; (11) Representational Stencil Design Test; (12) Numerical Progressions; (13) Organizer. The fourth category includes two additional instruments frequently used in the LPAD procedure: (14) Human Figure Drawing; (15) Test of Verbal Abstracting.

All 15 LPAD instruments are dynamically administered during MLE-based DA assessment sessions, conducted in an individual or group format. MLE-based sessions do not impose time limits and can involve a different number and assortment of the LPAD instruments because the goal of these sessions is to collect information about the examinees’ deficient functions. This information is needed for further teaching/learning activities to which the examinees are exposed while participating in the Instrumental Enrichment (IE) program, proposed by Feuerstein (1980, as cited in Feuerstein et al., 2002).

As Feuerstein et al. (2002) note, the IE program is profoundly informed by the LPAD and MLE concepts and represents an intervention program aimed at the removal of low and deficient cognitive functions. The IE program can be completed by the end of two or three years and can be implemented as a classroom program, in a small group or on an individual basis. The IE program includes 14 instruments designed to remediate the cognitive deficiencies identified throughout the MLE-based DA sessions in order to produce meaningful changes allowing learners’ to function at higher intellectual levels.
4.6.5 DA research in psychology and general education

A range of DA procedures has been developed for use with various populations around the world, e.g. young children, school-age children, adults and seniors (for a detailed review see Haywood & Lidz, 2007). For example, the participants of Karpov and Gindis’ (2000) study were elementary school children, aged 7-8 years, with significant language and learning problems. In their study a DA procedure was used for teaching/assessing analogical reasoning. The study intended to determine the cross-domain level of internalization of the child’s problem-solving activity. Karpov and Gindis (2000) investigated the transition of their participants from one level of problem solving to another and recommended using the following sequential levels of internalization: visual-motor (participants can move or touch the objects), visual-imagery (participants can see objects or their icons) and symbolic (participants deal with abstract substitutes of real objects).

With regard to school assessment practices, DA was primarily implemented in the field of special education (Bodrova & Leong, 2007). DA studies conducted in educational settings involved children with speech and language impairments (Peña & Gillam, 2000), children with reading and writing disabilities (e.g. Abbott, Reed, Abbott & Berninger, 1997; Duvall, 2008), or linguistically diverse school students of various ages diagnosed with learning disorders (e.g. Jacobs, 2001; Barrera, 2003) etc.

Analyzing the studies that have implemented DA in educational settings, Haywood and Lidz (2007) come to the conclusion that DA procedures are particularly suited to assess specific academic domains. They argue that DA implemented in
classroom settings may serve as the basis for more accurate diagnostic intervention of learners at various levels of regular education. In their view, NDAs are critical for informing instructional practices but cannot provide sufficient information for planning those practices. They point out that because “education addresses learning processes”, it should be able to measure these constantly moving processes and therefore requires the use of “a process-based assessment approach”, i.e. DA. Without process-based assessment, “the assessment information reflects what Vygotsky referred to as yesterday (the zone of actual development), when, as professionals concerned with learning, we should be concerned about and plan for tomorrow (the zone of proximal development)” (Haywood & Lidz, 2007:77).

Haywood and Lidz’s summary includes studies that applied DA to teaching/learning mathematics (e.g. Campione & Brown, 1987, 1990; Hamers, Pennings & Güthke, 1994), reading (e.g. Spector, 1992), speech and language (e.g. Laing & Kamhi, 2003; Kozulin & Garb, 2002). Correspondingly, in Russia TLE principles and procedures were realized and researched on a number of school subjects, e.g. mathematics (Davydov & Markova, 1992), geometry (Talyzina 1993; 2001, 2002), physics (Kalmykova, 1975), Russian as L1 (Juykov, 1971), foreign languages (Saburova, 1975; Obukhova, Porshnev, Porshneva & Gaponova, 2002) etc.

Although early applications of DA in psychological and educational contexts occurred nearly fifty years ago, L2 educators have only recently given attention to pedagogical applications of DA (Lantolf & Poehner 2004). For example, Antón (2003, 2009) mentions just two DA publications carried out in L2 settings (i.e. Schneider & Ganschow, 2000; Kozulin & Garb, 2002), whereas Lantolf and Poehner (2004) refer to
five studies (Güthke, Heinrich & Caruso, 1986; Peña & Gillam, 2000; Kozulin & Garb, 2002; Antón, 2003, 2009; Gibbons, 2003). The early studies on the implementation of DA in L2 contexts are reviewed in the next section.

4.7 DA in second language learning: methodological principles and practical applications

At present there is a growing support for the use of DA in second language pedagogy (Antón, 2003, 2009; Lantolf & Poehner, 2004; Poehner & Lantolf, 2005; Poehner, 2005; Ableeva, 2007, 2008; Summers, 2008). To date, there have been relatively few L2 DA studies supported by empirical data (e.g. Antón 2003, 2009; Ableeva, 2007, 2008) or longitudinal L2 studies that closely document changes in learners’ language development over time reporting on the effects of DA on L2 acquisition processes (Poehner, 2005; Summers, 2008; including the present study). In a paper presented at the conference of American Association for Applied Linguistics, Antón (2003, 2009) pioneered DA theoretical and methodological principles and integrated them into an L2 University placement test administered among advanced learners of Spanish. Although Antón’s investigation was earlier, Lantolf and Poehner (2004, 2006, 2007, 2008) and Poehner and Lantolf (2005) are largely responsible for introducing DA theoretical concepts to the applied linguistics community and for promoting DA as a pedagogical tool among L2 educators.

Following Vygotsky, L2 research views DA as a procedure that captures not only learners’ matured abilities (in this sense DA parallels NDA), but also (and more importantly) as a procedure that promotes learners’ maturing functions and “foregrounds
future development” (Lantolf & Poehner 2004: 54). Within the L2 DA framework, it is believed that “assessment and instruction are inseparable components of the same dialectical activity…” and that in DA “assessment and instruction become as tightly conjoined as two sides of the same coin – and there are no one-sided coins” (Lantolf & Poehner, 2008: 274).

From the L2 DA perspective, learning represents the ability to perform (e.g. to solve a problem or to carry out an instructional task) under mediation of a more skilled other (e.g. parents, teachers, more competent peers etc.) whereas development is seen as the ability to perform in a different context when the mediation is modified as to become more implicit or removed entirely. The goal of DA is to reveal learners’ potential future development on the intermental plane and to help it develop on the intramental plane through mediator-learner interaction. As a result, L2 DA understands the mediation as a pedagogical instrument that “is intended to bring to light underlying problems and help learners overcome them” (Lantolf & Poehner, 2008:273). Therefore, the effectiveness of a DA procedure is dependent upon the appropriateness and the quality of the mediation offered to learners because this must be sensitive to the dynamics of their abilities maturing in the learners’ ZPD.

A question that has also received notable attention in L2 DA research concerns the distinction between DA and other types of assessment, and the integration of DA into L2 instructional practices. The types of assessment discussed in L2 DA-based research primarily concern placement/proficiency assessment (e.g. Antón, 2003, 2009), summative assessment and formative assessment (e.g. Poehner & Lantolf, 2005; Lantolf & Thorne, 2006); Lantolf & Poehner, 2007). While describing the distinction between
DA and formative assessment (FA), Lantolf and Thorne (2006) point out that DA can be implemented as a classroom assessment in the form of formative procedure. They stress, however, that DA is not a special case of FA and that “the crux of the distinction is that FA is experientially based, while DA is derived from a full blown developmental theory” (p.356). They emphasize that DA must be systematic because “mediation cannot be offered in hit or miss fashion but should be tuned to the learner’s ZPD. It should account for individuals’ actual level of development as well as it should be continuously recalibrated in order to accommodate changes in the learner’s ZPD” (Lantolf & Thorne, 2006: 356).

The following subsections provide a review of Antón’s (2003, 2009) and Poehner’s (2005) studies that exemplify the implementation of interactionist DA into L2 adult learning and are presented in 4.7.1 and 4.7.2 respectively.

4.7.1 DA as a language proficiency diagnostic test

Antón (2003)\textsuperscript{41} reports on the utility of a DA procedure to test language proficiency of advanced L2 learners. The DA procedure included mediation to observe what students are able to do with the language while being exposed to dialogic teacher-learner interactions. The study, which was conducted at an urban US university, involved five undergraduate students majoring in Spanish and starting the 300-level course sequence. A language proficiency diagnostic test used in the study was designed to provide more information concerning students’ placement into courses. The test consisted

\textsuperscript{41} The description of Antón (2003) study is based on her unpublished paper presented at the AAAL conference. See also Antón (2009) which includes her paper presented at the AAAL.
of five subtests: (1) a grammar/vocabulary test; (2) a listening comprehension test; (3) a reading comprehension test; (4) a writing sample; and (5) an oral interview. The subtests measuring writing and speaking abilities were partially administered dynamically. The findings from these two subtests are especially relevant to the present study and will be considered below in more detail.

**DA of L2 writing abilities**

During the completion of the writing task, students were asked to write a composition about their language experiences without resorting to dictionaries or grammar references. The subtest proceeded to the stage of revisions involving some DA features. First, students were allowed to revise their compositions on their own. Then, they independently performed revisions using dictionaries and grammar manuals. Finally, students were encouraged to ask the examiner questions and to add necessary corrections. Antón interpreted the results of the writing test in light of the scores received for compositions and the number of revisions made by students. She found that the least number of revisions were made by the participants S2 and S4, who obtained the lowest and the highest score respectively. From a DA perspective, S2 results would indicate, as noted by Antón, that this student had not been provided with sufficient mediation during the revisions stage and/or, with regard to placement decisions, S2 would be recommended to take an appropriate course where she would receive extra help in order to develop her writing abilities.

**DA of L2 speaking abilities**

The speaking component of the diagnostic test included four sections: (1) questions related to students’ interests and experiences with the target language and
culture; (2) oral narrative of a picture story in the past; (3) a role play; (4) a 3 minute monologue based on a choice of two topics. The second section, i.e. the oral narrative, was administered dynamically and contained three subsequent stages involving the following test activities: 1) students’ independent narration of the story; 2) students’ re-narration of the story under the examiners’ assistance offered in the form of hints and direct instructions; and 3) examiner’s narration of the picture story offered to students who did not profit from the examiner’s assistance during the second stage.

For the purpose of comparison, the study provides two examples taken from the protocols of participants S2 and S3. The examples illustrate the mediation sessions and provide insights into the students’ mastery of the Spanish past tenses. According to Antón’s commentary, S3 was able to narrate the story and to control the use of past tenses in a satisfactory manner. Although he switched from past to present tenses forms a couple of times during the task completion, he was able to employ the examiner’s help regarding his incorrect use of past tenses. When given the opportunity to re-narrate the story, he did it appropriately and was quite successful at avoiding tense switches. Therefore, S3 needed the minimal amount of corrective feedback and was qualified as a student whose oral proficiency level is adequate or above average for entry-level Spanish Majors.

Unlike S3, participant S2 demonstrated a weak ability to control the use of past tenses and tended to use predominantly the present tense while completing the narration task. In addition to various grammatical and lexical errors, S2 demonstrated that she knew the morphology of verb past forms, but was unable to sustain the correct use of the
person agreement markers. The following excerpt exemplifies this observation (as presented and translated in Lantolf & Poehner, 2004:63):

**Example 4-1:**

S2: *Jugué al tenis* [I played tennis]
E: *Jugué o jugó* [I played or she played?]
S2: *Jugó* [She played]

Later on in the re-narration:

**Example 4-2 :**

E: ... *Muy bien. Y aquí dijo, que hizo?* [Very good. And here you said, what did she do?]
S2: *Comí* [I ate]
E: *Comí o comió* [I ate or she ate?]
S2: *Comió* [She ate]
E: *Comió*

The excerpt of student-examiner interactions shows that despite two explicit hints, S2 was unable to use effectively the examiner’s corrective feedback or to regulate her narrative. From a DA perspective, S2 demonstrated a narrow ZPD concerning her ability to control the use of verb morphology and for this reason she required a substantial degree of assistance in the form of examiner’s direct instructions. In light of the problems experienced by the participants of Antón’s study, Lantolf and Thorne (2006:340) point out that from a SCT-based perspective, the independent performance of the students are “equivalent as both had problems producing appropriate past tense forms”; however, their interactions with the examiner revealed that these students have different capabilities regarding the same grammar features and, therefore, “have different ZPDs relative to past tense morphology”.
The significance of Antón’s study is that it represents an early attempt to diagnose L2 language proficiency by opting for the interactionist approach to DA (Poehner, 2005). The results of the study also show that the inclusion of a mediation-driven DA procedure in the placement test increased the test’s ability to differentiate students’ writing and speaking skills and to provide the students with more accurate recommendations concerning their particular academic needs.

**4.7.2 DA of L2 advanced oral proficiency**

In his adaptation of DA to adult second language learning, Poehner (2005) provided mediation in a manner sensitive to learners’ ZPD grounded in flexible interactions between mediator and learner. The primary purpose of Poehner’s study was to enhance the use of verbal aspect (*passé composé* and *imparfait*) among advanced L2 French university students through an interactionist DA procedure. The verbal aspect chosen for the study is notoriously difficult for L2 learners learning Romance languages (e.g. *passé compose* and *imparfait* in French; *preterito* and *imperfecto* in Spanish; *passato prossimo* and *imperfecto* in Italian; *trecutul compus* and imperfect in Rumanian), specifically for learners whose L1 does not explicitly distinguish between these two past tenses (e.g. English as L1).

During the individualized sessions the participants were required to compose past-tense narratives based on short video clips from two feature films and an extract from a

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42 In addition to the past tense aspect, DA sessions also dealt with other grammar-lexical features of French (e.g. complex negative constructions, the conjugation of pronominal verbs, the use of conditional, appropriate lexical choice) geared to students’ linguistic problems emerging from the mediator-learner interactions.
literary text. The study involved the following stages: 1) a non-dynamic and dynamic pretest; 2) an L2 enrichment program; 3) a non-dynamic and dynamic posttest; and 4) two transfer assessment sessions. During the pre-test stage the students constructed two oral narratives based on a video clip: the first narrative was created independently (non-dynamic) and the second involved the researcher-participant’s mediation (dynamic).

These initial assessments allowed Poehner to diagnose the source of linguistic problems that impeded an appropriate construction of past-tense narratives. The excerpt below taken from Poehner (2005:251) exemplifies researcher-participant flexible interaction during the first dynamic session of the study. Here Amanda (participant’s pseudonym) narrates a video clip from the film *Nine Months* (in this clip two characters were driving in a car):

1. **(A)manda:** *Samuel et Rebecca se sont conduit chez Sean*—
   
   drove themselves to Sean’s—

2. **(M)ediator:** so using the passé composé?

3. **A:** passé composé

4. **M:** because?

5. **A:** because driving somewhere has a specific beginning and end point? so they have a destination so there is an end point

Amanda’s answer contains two errors: the incorrect use of verb formation and the problematic choice of verbal aspect (line 1). Her explanation of her choice to use the *passé composé* indicates that Amanda is attempting to apply normative rules that describe conditions when verbal forms are often used (lines 5 and 6). However, because she does not fully understand the concept of verbal aspect, the rules lead to confusion and inappropriate constructions. Following the pre-test sessions, Poehner set up an
enrichment program (six weeks) that aimed to provide ZPD-sensitive instruction with respect to learner linguistic problems identified in the course of the pre-test stage.

In order to help learners to gain greater control over the past tenses, the instruction was based on a conceptual presentation of verbal aspect. In rejecting the rule-based explanations of the passé composé and imparfait that one can find in traditional pedagogical grammars, Poehner (2005) opted for the linguistic concepts of perfective and imperfective aspect presented in Dansereau (1987) and Negueruela (2003). To develop a conceptual understanding of verbal aspect, Poehner also used Negueruela’s explanations and supporting visual representations (in the form of a diagram) that helped Negueruela’s L2 Spanish students to arrive at a conceptual understanding of two past-tenses (preterito and imperfecto).

At the end of the study, participants were asked to repeat the same task: during two post-test sessions (non-dynamic and dynamic), they narrated the same clip from Nine Months so that their narratives could be compared for the signs of change. The following excerpt from Poehner (2005:254) presents Amanda’s narration of the same video clip during the dynamic posttest session that entailed researcher-participant negotiation of mediation:

1. A: …ils *se se conduisaient et Samuel parlait de ses opinions de des they were driving themselves and Samuel was talking about his opinions of of
2. parents et de leurs responsabilités des enfants parents and their responsibilities of children
3. M: yeah that’s good just a little more
4. A: et pendant pendant il parlait Rebecca a dit oui oui et enfin um il ou elle a annoncé qu’elle était enceinte et Samuel a crié quoi et il a perdu contrôle and while while he was talking Rebecca said yeah yeah and finally um he or she announced that she was pregnant and Samuel screamed what and he lost control
Despite some lexical and structural errors, the above excerpt reveals Amanda’s appropriate use of verbal aspect (lines 1, 4, 5). It also demonstrates that throughout the enrichment program, she developed a conceptual understanding of how verbal constructions can be used to convey precise meanings. More specifically, when asked, she provided the following explanation of aspect choice: “it was while he was driving and then the scene they were driving he was talking and then she said that she was pregnant” (Poehner 2005, 254).

Finally, Poehner conducted two transfer sessions intended to establish the extent to which participants could internalize and extend the mediation provided in previous sessions. The first transfer (TR1) narration task was based on the video clip taken from the film The Pianist, which is a considerably more complex story than Nine Months. The second transfer (TR2) task differed from other sessions in a more substantial way: it required the students to read and to narrate an extract from Voltaire’s Candide. Poehner designed TR2 task as a far transfer task and considered it more difficult than other tasks in the study because it was based on a written as opposed to spoken texts used in the other assessments. The selected excerpt was a text in French written in the past, containing the passé simple, instead of the passé compose. According to Poehner (2005), the change of film genre (TR1) and the change of ‘the medium of the prompt itself’ (TR2)”was intended to provide more insights into “the extent to which participants could extend their learning beyond the original assessment context (p. 128).”

43 In modern French the passé simple is usually used in literary texts. Similarly to the passé composé, the passé simple indicates that an action was completed in the past but, unlike the passé composé, has no relation to the present moment.
Poehner closely documents students’ developmental manifestations during the transfer assessments and reports on their increasing control over targeted tenses and aspect. Interestingly, Poehner notes that all participants found the TR1 task the most difficult task of all. The clip from *The Pianist* chosen for the TR1 session contains a gloomy depiction of the survival of one Jewish man during the Holocaust and was very much unlike the light-hearted content of *Nine Months*. It challenged students’ narrative performance by exposing them to new linguistic problems. According to Poehner, one possible explanation concerning the experienced difficulties is that the completion of the TR1 task still required students to make decisions on how to mark aspect and at the same time to focus their attention on the appropriate choice of new lexical items.

In addition to the source of problems outlined by Poehner, another possible explanation of learners’ difficulties may contribute in interpreting the results from the TR1 session may. That is, Vygotsky (1999) argued that one cannot separate cognition from emotion, which form a dialectical unity. This argument is also supported by Belopoloskaya’s (1997) study, which investigated the relationship between the emotional and cognitive components of the ZPD (see chapter 3). Thus, given the fact that in Poehner’s study the learners watched a heartbreaking scene in which the protagonist barely escapes capture by Nazi soldiers, it is possible that the learners’ emotional functioning interfered with their cognitive functioning. Therefore, although some of the learners were able to complete the task more successfully than others, a clip overloaded with painful emotions could negatively influence the affective component of learners’ ZPDs and consequently challenge their ability to control verbal aspect which was still in their ZPDs.
The TR2 session provided more information about developmental changes and thus, revealed the improved understanding of the targeted aspect. The following excerpt (ibid., pp. 255-256) demonstrates Amanda’s enhanced ability to control aspect and “the conceptually more sophisticated nature of her explanations” (Poehner, 2005: 256):

1. A: (also laughing) peut-être pour lui il croyait tout que Pangloss lui a disait* maybe for him he believed everything that Pangloss told him
2. pendant ses lectures during his lectures
3. M: il croyait tout ce que Pangloss? he believed everything that Pangloss
5. M: lui a dit ou tout ce dont Pangloss a parlé on parlait de something so it would told him or everything about which Pangloss spoke or would speak
6. become dont ce dont Pangloss a parlé ou a discuté so you’re using passé composé? about which Pangloss spoke or discussed
7. A: oui pendant ce lecture où ils se sont discuté* de peut-être cette (. ) cette session particulier yes during this lecture where they discussed maybe this this particular session
8. M: okay ce sujet par exemple okay this subject for example
9. A: oui ce sujet spécifique et yes this specific subject and-
10. M: now earlier sorry I just heard you say earlier when you introduced Pangloss you said that
11. Candide croyait tout ce que Pangloss disait using uh imparfait now this is almost the same believed everything that Pangloss would say
12. structure because here you’re saying Candide croyait tout ce que Pangloss lui a dit Candide believed everything that Pangloss told him
13. um I was just wondering if that was like if you’re yeah what do you think?
14. A: le premier c’est pour en général dans tous les leçons tous les sujets et le the first it’s for in general all the lessons all the subjects and the
15. deuxième c’est pour le sujet spécifique second that.s for the specific subject
16. M: oh okay ce sujet-là okay
17. A: ce sujet oui la session que le livre a présenté quand Cunégonde entraït this subject yes the session that the book presented when Cunégonde was entering
18. et écoutait à Pangloss and listening to Pangloss
In lines 14-15, Amanda offers an explanation regarding her choice of aspect when using the verb *dire*. She clearly states that in the first case (line 14), she used the *imparfait* because the action of the verb referred to what the character would always say. The second use of *dire* required the *passé composé* (line 15) because here *dire* introduces what the character (Pangloss) said in one specific situation in the past. Additionally, the findings of Poehner’s study confirm the importance of transfer assessments with more complex tasks (Talyzina, 1986; Feuerstein, Rand, & Hoffman, 1979; Brown & Ferrera, 1985; Campione, Brown, Ferrara & Bryant, 1984). According to DA literature, the transfer assessments enable researchers to assess development in a more accurate manner, i.e. to reveal the extent to which the development of learners’ has occurred.

Thus, Poehner (2005), working from a Vygotskian perspective, conducted one of the first extensive L2 DA studies which closely documents changes in learners’ L2 oral development over time. The findings of Poehner’s study also support Vygotsky’s claim (1987) about the revolutionary (not evolutionary) nature of cognitive development, which is not smooth and moves in unanticipated directions.

During the dynamic and transfer sessions, the mediator was engaged in flexible interaction with the participants, offering hints, prompts, questions, suggestions and explanations. As noted by Poehner, the mediation used throughout the assessments and the enrichment program “was not determined a priori and then applied to a given assessment but, rather, was dependent on the specific context of mediator-learner interactions” (p. 151). The methodological suggestions developed by Poehner (2005) underlie the design of the present study and were used during the stages that involved dialogic interactions between the researcher (i.e. mediator) and the learners.
4.8 Conclusion

The review of psychological and educational DA research has shown that the theoretical foundation of DA stems from Vygotsky’s sociocultural theory. Sections 4.2 – 4.3 have addressed the definition and the conceptual basis of DA. The studies reviewed provide ample evidence that even though some current DA approaches do not directly derive from SCT (e.g. Feuerstein), nevertheless they have borrowed and modified SCT’s original concepts, and methodologies and “took off from Vygotsky’s work as the main launching point for their research” (Sternberg & Grigorenko, 2002:46). For this reason, the chapter offers a detailed discussion of such major SCT concepts as the ZPD, mediation and development. The ZPD allows researchers and educators to gain insight into the learner’s future development and is central to SCT-based DA. The reviewed psychological and educational research asserts that DA brings assessment and instruction together into an organic unity whereby learning is the result of mediation, which is then internalized and becomes accessible to be deployed later in other contexts as sign of development. Thus, SCT- based DA proponents highlight that development potentially never stops and as long as humans have access to new symbolic mediational means through social interactions (e.g. teaching/learning processes), they continue to develop (Lantolf: personal communication, 2006).

The major formats and types of DA are outlined in sections 4.4 while section 4.5 scrutinizes the differences and similarities between DA and NDA and presents a number of characteristics describing the examiner-examinee relationship that juxtapose DA and NDA. Section 4.6 discusses various approaches produced over the last fifty years by the
DA framework, including TLE, and proposes to consider TLE as a legitimate DA approach. Similarly to many DA approaches designed in the West, TLE, initiated by Luria (1961) and Leontiev, Luria and Smirnov (1968), is anchored in SCT and like all DA approaches looks at the responsiveness of learners to mediation in order to identify their learning potential and to modify their cognitive functioning. Additionally, this section overviews two leading DA approaches proposed by Budoff and Feuerstein (4.6.1 and 4.6.2 respectively). The section also reviews the studies that applied DA to various psychological and educational contexts (4.6.3); these studies offer evidence, as Haywood and Lidz (2007:77) put it, of the “truly ecumenical” nature of DA.

Finally, section 4.7 discusses the early L2 DA studies that have been informed by Vygotsky’s theory. Therefore, SCT supplies a specific assessment framework and guidelines for administrating DA in L2 settings. L2 DA studies argue that through interaction in the ZPD, DA allows instructors to diagnose and assess not only the actual level of students’ language abilities but also their potential language development, while at the same time promoting this development (Antón, 2003, 2009; Lantolf & Poehner, 2004; Poehner, 2005; Ableeva, 2008).

On the basis of the reviewed psycho-educational and L2 research (see also chapter 3), the present study views DA as a pedagogical tool that enables language educators to gain more insights into the development of L2 abilities, to more accurately diagnose the source of learners’ linguistic problems through mediation and in so doing to help learners overcome the identified problems and move their development forward. This DA potential has not been used for teaching/learning L2 listening comprehension to date, and the present study aims to fill this gap. The next chapters will discuss the effects of DA on
listening instruction and its contribution to the diagnosis of linguistic and cultural problems that impede the comprehension of authentic aural language among L2 intermediate university students.
Chapter 5

Research Design and Methodology

5.1 Introduction

The present study lies within an interdisciplinary framework which includes second language acquisition and Vygotsky’s sociocultural theory of cognitive development. The main purpose of the study is to investigate the diagnostic capacities of DA as well as the effects of DA-based instruction on the development of listening proficiency in intermediate L2 university students of French. The study applies an interactionist DA approach and is based on a longitudinal research design enabling the observation of listening development over time. Based on these premises, the study implements a mixed methods research methodology, i.e. microgenetic analysis, a key sociocultural method, and propositional analysis, as a supplementary analytical method.

The present chapter is subdivided into five main parts and a summary. First, the chapter details the context of research (5.2) by introducing the participants of the study and describing the course from which they were recruited. Next, the chapter portrays the listening materials used in the study. The chapter then outlines the methodology used to address the research questions (see chapter 1) being pursued in this study (5.4). That is, microgenetic analysis was used as the general methodological framework allowing the tracking of learner’s development over time, and propositional analysis (namely, pausal unit analysis) was the specific method employed for the elicitation of text comprehension (5.4.1 and 5.4.2 respectively). In section 5.5 the chapter introduces the research design
and presents the design of the pedagogical experiment (5.5.1), the data collection instruments and transcription conventions (5.5.2), the text comprehension measurement (5.5.3), the texts selection criteria (5.5.4) and the task characteristics (5.5.5). Finally, the chapter considers the purpose of the assessments implemented in the study (5.6). In addition, section 5.6.2 provides an overview of the enrichment program which builds on research conducted by Feuerstein (Instrumental Enrichment, see also Feuerstein, Rand & Rynders, 1988) and by Poehner (2005). The summary (5.7) provides a link from this chapter to the data analyses in chapters 6, 7 and 8.

5.2. The context of the research

5.2.1 Listening abilities of intermediate learners

University language classes are often comprised of students whose experience with the target language varies widely. This is especially true of the intermediate level, where some students have passed through the university’s basic language program but where others have been placed as a result of language study in secondary school or time spent in an L2 environment. For many students, comprehending authentic aural language, especially during traditional approaches to assessment, is one of the most frustrating and difficult aspects of their language learning experience. In part, this situation is due to the current lack of effective methods intended to develop L2 listening abilities (as argued by Rost, 2002, Buck, 2003), and it can also be the result of assessment practices used for eliciting text comprehension. It is also due to differences between the target language taught in classroom settings and the spoken language used by educated native speakers
(Kinginger, 1998), as well as to students’ language proficiency and the type of text presented in the assessment.

The findings of recent studies show, however, that mere exposure to authentic input is not enough for the development of learners’ L2 proficiency (e.g. Lantolf & Thorne, 2006; Kinginger, 1998; Belz & Kinginger, 2003; Vyatkina, 2007). These studies provide theoretical (Lantolf & Thorne, 2006) and empirical justification for the administration of the pedagogical intervention based on explicit instruction in the form of conceptual presentation of spoken language phenomena (e.g. Joseph, 1988; Kinginger, 1998), of listening practice involving language observation activities (e.g. Valdman, 1992), discussions of the authentic discourse produced by native speakers and cross-linguistic comparisons (McCarthy &d Carter, 1995; Kasper, 1997; Vyatkina, 2007). Although L2 research has indicated the usefulness of explicit concept-oriented instruction for the development of L2 proficiency, many recent textbooks intended to develop the L2 listening of intermediate students do not present L2 spoken features conceptually and provide minimal explanations of these features. This point is considered below (5.2.2) in the discussion of O’Neil’s (2005) listening textbook.

5.2.2 The course: Intermediate Oral Communication and Reading Comprehension

The focal learners of this study were 7 intermediate students enrolled in a French Oral Communication and Reading Comprehension course at a major public university in the northeast United States. The course is regularly offered in fall and spring semesters and usually comprises 5 sections with 24-25 students each. The primary goal of the course is to enhance students’ performance in French, with an emphasis on speaking and
reading. However, the course also aims to improve students’ ability to comprehend authentic spoken discourse. To achieve this aim, the course requires students to listen to video segments from the textbook *La France et la Francophonie* (O’Neil, 2005) which intends to acquaint them with “a broad range of accents and styles” and includes segments from interviews produced by French and Francophone native speakers of different ages, social and professional background.

The author informs textbook users that “American students may be shocked at first to hear such different accents as well as French spoken so quickly” (ibid., p. xvi). For this reason, O’Neil encourages students to listen to the texts many times in order to comprehend them fully. She emphasizes, however, that the advantage of the book is “that it presents contemporary French as it is spoken in everyday life, in all its complexity and richness” (ibid., p. xvi). To facilitate comprehension, the textbook provides transcriptions followed by a section termed ‘Notes’ which contains translations of morphosyntactic structures that could potentially cause comprehension difficulties and information about some features of spoken French. However, the textbook lacks adequate explanation concerning the features of authentic aural French: it simply invites the listeners to observe these features as they appear in the video segments without presenting the qualities of spoken French in a systematic way.

According to the course syllabus, the course instructors required students to listen to the texts from *La France et la Francophonie* once a week. The instructors used the textbook mainly for introducing new cultural information and for presenting students

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44 The textbook includes a collection of video texts grouped in twenty chapters, each focusing on one specific topic (e.g. Cities; House; Food; Sports; Cinema; Education; Family; Politics; Social problems). In the preface, O’Neil describes her textbook as a “workbook [that] may be used in or outside the classroom” and selected video texts as “materials [that] are suitable for advanced high school classes, any university-level French course, and adult education” (O’Neil, 2005: xv).
with new lexical items that they found important for inclusion in the course curriculum. None of the five instructors used the textbook for familiarizing students with the particularities of spoken French.

5.2.3 Recruiting participants

A brief introduction to the study was provided to students enrolled in all sections of the focal course at the beginning of spring semester 2007\(^{45}\). First, the researcher obtained permission from the instructors teaching focal courses to come into their classes and to present the study. Then, the researcher visited all sections of focal courses and briefly explained the purpose of the study. It was pointed out that (1) the study aimed to explore a new approach to assessing and improving students’ listening abilities; and that (2) participants would be accepted for inclusion in the study on a first-come, first-served basis until the quota of 10 individuals was attained. Compensation for participation would come in the form of individualized tutoring sessions. It was also stressed that the schedule of the study heavily depended on the room availability in which the sessions would take place. Interested students were invited to contact the researcher via email.

During the two days, the researcher received thirty-one emails from interested students volunteering to take part in the study. Finally, seven participants were selected for the study. This reduced number of participants (7 out of 10) was due solely to scheduling difficulties. Only the students whose academic and personal schedules matched the time when the experimental room was available for data collection participated in this phase of the study.

\(^{45}\) IRB approval was obtained from the Office for Research Protections of the focal University.
5.2.4 Participants

Seven intermediate\textsuperscript{46} university students studying French as an L2 volunteered to participate in this study. All participants were American English native speakers, ranging in age from 18 to 20. At the time of the study six students were enrolled in 3 various sections of the Intermediate Oral Communication and Reading Comprehension course and one student came from the fourth-semester Intermediate Grammar and Composition course per his personal request. At the outset of the study, each volunteer completed two questionnaires detailing her/his L2 profile and learning history (see Appendices D and E).

It should be noted that SCT scholars view a human (a learner) as an “individual-in-society-in-history” (Dunn & Lantolf, 1998: 427) and underscore the importance of learners’ previous spontaneous (or every-day life) development, self-development and their educational environment\textsuperscript{47} (A. A. Leontiev, 2001). Following a sociocultural perspective, it was expected that the questionnaire data would provide insights into learners’ L2 learning history and would allow better organization of the experimental stage of the study. The participants’ pseudonyms and their L2 French learning background information are presented in Table 5-1.

\textsuperscript{46} In conformity with the policy of the focal language department, the level of students’ language proficiency is determined according to the number of semesters they have studied French at the university. Therefore, all participants of the present study are considered intermediate students on the basis of their enrollment in a fourth semester undergraduate university L2 French course at the time the study.

\textsuperscript{47} Leontiev (2001) points out that learners’ educational environment includes family, communication with friends, the mass media and is important for learners’ learning development.
Table 5-1: Biographical and language learning data

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Gender</th>
<th>Age</th>
<th>L1/ C1</th>
<th>Other L2s</th>
<th>L2 French pre-college</th>
<th>Semester standing in the university</th>
<th>L2 college semester</th>
<th>L2 status as subject</th>
<th>Travel overseas</th>
<th>Time in L2 countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chris</td>
<td>M</td>
<td>18</td>
<td>AE</td>
<td>None</td>
<td>2 MS 4 HS</td>
<td>2</td>
<td>1</td>
<td>minor</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>2. Dan</td>
<td>M</td>
<td>18</td>
<td>AE</td>
<td>None</td>
<td>5 years 2 HS</td>
<td>2</td>
<td>1</td>
<td>elective</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>3. Erica</td>
<td>F</td>
<td>19</td>
<td>AE</td>
<td>Spanish</td>
<td>3 HS</td>
<td>3</td>
<td>3</td>
<td>minor</td>
<td>Y</td>
<td>One 1-week tour to: France</td>
</tr>
<tr>
<td>4. Fée</td>
<td>F</td>
<td>18</td>
<td>AE</td>
<td>Spanish Latin</td>
<td>5 years 2 HS</td>
<td>2</td>
<td>2</td>
<td>Undecided; wants to major in French</td>
<td>Y</td>
<td>One 2-week tour to France</td>
</tr>
<tr>
<td>5. Lora</td>
<td>F</td>
<td>20</td>
<td>AE</td>
<td>None</td>
<td>4 HS</td>
<td>4</td>
<td>2</td>
<td>minor</td>
<td>Y</td>
<td>One 2-week tour to France</td>
</tr>
<tr>
<td>6. Michel</td>
<td>M</td>
<td>20</td>
<td>AE</td>
<td>Spanish, Latin</td>
<td>1 HS</td>
<td>4</td>
<td>3</td>
<td>major</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>7. Mona</td>
<td>F</td>
<td>19</td>
<td>AE</td>
<td>Latin</td>
<td>3 HS</td>
<td>4</td>
<td>3</td>
<td>elective</td>
<td>Y</td>
<td>One 1-week tour to France/ Switzerland</td>
</tr>
</tbody>
</table>

*Note.* L1 = learners’ first language; C1 = learners’ first culture; AE = American English; MS = middle school; HS – high school.

---

The following paragraphs introduce the participants of the study and describe their approach to L2 learning, their experiences related to listening comprehension (e.g. listening to French authentic language, interactions with French native speakers etc.). The descriptions are based on the participants’ answers obtained through two pre-study Biographical/Language Questionnaires (see Appendices D and E).

*Chris* was a second-semester student, majoring in Geosciences and minoring in French. He was a highly motivated and hard-working student. He took learning French very seriously, and made impressive progress during the study. In the pre-study questionnaire he wrote: “It [French] has cultural and personal value to me. I like the language and it will be useful when I work overseas. Geologists often work overseas in coordination with other international professionals. With a second language, I will be more valuable to employers and better able to share data and work effectively overseas.” In relation to studying languages, Chris indicated: “I have only studied French as a second language. I have worked hard to memorize key vocabulary, and I am at a medium level of skill. I feel the most comfortable writing. The major problem I suffer in French is speaking with fluidity, and actually thinking in French. My translation and reflection between phrases contributes to some pronunciation problems as well.” He also indicated that he occasionally interacts with French native speakers. For example, he has recently befriended a French exchange student, and he used to be pen pals with a few French students last year through email. He also often comes into intentional contact with Francophone speakers in online games, chat rooms and forums in order to observe informal French used by youths and to compare it to the so-called “correct” French of textbooks. With respect to listening comprehension, he often had trouble staying focused
on longer listening sections. For this reason, Chris intentionally exposed himself to “real spoken French” about twice a week by routinely listening to French radio stations on the Internet and watching TV5 in his dormitory room.

Dan was a second-semester Geobiology major, interested in continuing to learn French. He studied French for all of high school and intended to study it further in college, otherwise, he wrote, “it will have been a waste”. He intended to become fluent in the language because he planned “to travel a great deal in the future” and believed that “knowing another language may be useful”. He also pointed out that he was interested in learning another language to improve communication skills and international education. His learning style was based mostly on expanding vocabulary and grammar, as well as watching videos and reading stories in class. Dan remarked in his bio-questionnaire: “My [school] teacher was important in my studying [French], since I would speak to her now and then about French studies in general.” He considered practice to be important for learning a language, i.e. practice in the form of listening or reading. In relation to listening comprehension, Dan had little experience before his participation in the study. He indicated that he had only seen a few French news shows, a few movies, and listened only a few times to the radio in school.

Erica was a third-semester undergraduate Advertising major, minoring in French and Psychology. She wrote in the bio-questionnaire about the importance of L2 study: “I want to be able to understand oral French better, so this is important to me. As a French minor, I never know if I’ll have to use French in my daily life (ad campaigns) etc. So, I want to be confident in my speaking/listening abilities.” She started studying Spanish first during junior high school and then picked up French, which she liked more than
Spanish, halfway through high school. Her expectation for French language courses at the university level was to improve her oral skills. She pointed out: “My main problem seems to be hearing a French text from a CD player and deciphering what it says. If someone goes slowly enough, of course, this isn’t a problem- other teachers would abandon the CD and read the text themselves for an exam and I feel like I was cheated a little bit. I’m confident in my reading and writing, but speaking and listening are my main areas of concern.” Erica also indicated that during her one-week stay in France, she intentionally interacted with various natives, e.g. waiters and shop owners. She also had some experience in listening to authentic texts in classrooms as well as on the internet and on television.

Fée was a second-semester undergraduate student. She did not indicate any major or minor but at the time of study she was thinking of majoring in French. In 7th Grade, she took a few weeks of French, Spanish, and Latin, to see what she would want to take in 8th grade and opted for French because the language was pretty and she enjoyed speaking it. Being in high school, she had many interactions with French native speakers. One of her French teachers was from Paris, and in 10th grade, she hosted a French student, Romain, for two weeks and became close with him and his friends. Then, two years later, in 12th grade, with the same exchange program, she went to France, met Romain and his friends again, and became close with her French host, Marine. She wrote in her bio-questionnaire that her expectations for L2 courses at the college level were to become fluent in French and “to improve my listening skills, which I need the most help in.” Fée explained that “it’s really easy to not understand [sic] what others are saying in French, even if I can understand it written or spoken in class. I have a lot of trouble with
listening comprehension, especially with different accents, and when it is spoken very quickly.” Féé also indicated that she had very limited experience (once or twice a semester) in listening to authentic texts in educational settings.

*Lora* was a fourth-semester student, majoring in Supply Chain and Information Systems/International Studies, with two minors, International Business and French. She wrote that “foreign language is very important to me. I hope to incorporate foreign language and travel into my work post-college.” She also wished to travel in or live in France at some point in her life. Lora thought that “being immersed in the language as much as possible is very important for learning.” She did not know “how instrumental my teachers have been in improving my French, other than constantly speaking the language to me.” Lora’s expectation for French courses at the university level was to improve her French skills. With regard to L2 listening, Lora occasionally watched TV5 programs in her dormitory room, listened to some French music at home, and was exposed to authentic French language “a couple of time a semester”.

*Michel* was a fourth-semester undergraduate student majoring in International Studies and French with a specialization in Linguistics. He also planned on minoring in Spanish. He wrote in the bio-questionnaire: “in the future, I would like to conduct research in the areas of French and linguistics - possibly with a focus on French Sign Language. I would also enjoy teaching at the University level and one day be able to live in France and carry myself as though I were a native speaker.” He had a strong motivation in learning foreign languages. For Michel, a language was more than just grammar and a collection of words. In his view, mastering a foreign language “can be a passport to the world and the key to a richer personal and cultural life.” His high school
Spanish teacher gave him a passion for languages. In high school, he had 4 years of Spanish and 1 year of French. In college, he took a Latin course (one semester) and Spanish (two semesters). With respect to French, he took two basic French language courses (first-semester and second-semester), then at the request of his second-semester instructor, he skipped the required third-semester basic language course and moved right into an intermediate fourth-semester course. In terms of listening comprehension, Michel indicated that he had difficulties with understanding certain contractions and slang because French flows beautifully but words are linked right into the other as though they were one word. He wrote that he was better able to understand Spanish speakers because he has been exposed to many Spanish native speakers. During his French classes, he did not listen to many texts. The majority of oral texts were played during the exams. He saw, however, two French movies and listened to “one or two songs”, played and discussed in class.

Mona was a fourth-semester double major in Art History and Art. She indicated that L2 study “is very important for my art history major to be able to read scholarly journals in foreign languages; reading knowledge of French and German are generally required for admission to graduate programs.” She also noted that future internships and jobs in art museums and international auction houses often require foreign language experience, “especially the auction houses, since they consist of multiple international offices”. While taking college French language courses, she expected to improve her conversational abilities, in particular to become more fluent in using grammar and vocabulary when speaking. In classroom settings, her” main source of exposure to a “pure” French accent” was “various movies with spoken French in them”. She also
listened to authentic texts in classrooms “maybe 2-3 times per week” and on the internet, and sometimes on television. Mona was also exposed to authentic French outside of the educational settings, e.g. she visited France and Switzerland for a two-week tour during her senior year of high school.

5.3 Listening materials

5.3.1 Authentic texts and language pedagogy

Over the last three decades, the concept of authenticity has gained notable attention among foreign language educators. In the early 1970s applied linguists, inspired by Hymes’ sociolinguistic theory of communicative competence and Krashen’s psycholinguistic theory of natural second language acquisition, stimulated a growing debate regarding the necessity of exposure to ‘authentic’ or ‘natural’ language in the process of language acquisition (Mori, 2002: 323). The analysis of academic publications related to this debate clearly demonstrates that in language pedagogy authenticity is a term associated primarily with written texts (Widdowson, 1979; Breen, 1985; Kramsch, 1993; van Lier, 1996). This can be explained by the fact that “the use of texts, from whatever sources, is a central aspect of language pedagogy” (McCarthy, 2001:139; italics added). Since the 1970s, many types of authentic texts (e.g. newspapers, magazines, advertisements, radio and TV programs etc.), have been regarded as appropriate and valuable for learning foreign languages. However, although today this idea has received widespread support among scholars, there is a lack of general agreement regarding the
academic level at which authentic texts can be incorporated into the process of L2
teaching and learning (Auger & Valdman, 1999).

A considerable amount of research has shown that authentic texts, in particular
authentic audio texts, have a significant impact on developing communicative
competence in foreign language classrooms. L2 educational research claims that the oral
speech of native speakers should be presented in the form of audio/video recordings (e.g.
Reboulet, 1979, Léon, 1979, Lèbre-Peytard, 1987; Galisson & Coste, 1988; Malandain,
1991; Mohan, 1986; Valdman, 1992; Kramsch, 1985, 1993; Hall, 2001; Buck, 2003,
Leontiev, 2003, etc.). In this regard, researchers provide many arguments for the use of
authentic audio materials. According to Léon (1979), for example, authentic audio
materials allow learners not only to have access to another culture but also to discover the
means of oral expression in a multitude of socio-cultural situations. This can help learners
to express themselves more easily in the foreign language. Given that authentic texts are
not modified for pedagogical purposes and that therefore their content may entail many
interpretations (Leontiev, 2003), the integration of authentic texts into L2 contexts can
create the necessary conditions for L2/C2 development.

5.3.2 Collection of listening materials

5.3.2.1 Interviews as listening materials

In order to provide listening materials that would correspond to the study
requirements (see 5.5), it was decided to collect video interviews with French native
speakers. L2 research regards the interviews as a valuable genre to be used in listening
instruction because they represent “one of the few natural conversational interactions conducted for the benefit of non-participants” (Buck, 2003:167). In this respect, the interviews allow teachers to avoid situations in which learners find themselves in the position of eavesdroppers in which they listen to conversations (e.g. dialogs) intended exclusively for the participants of these conversations (Hendrickx, 1977, as referred in Buck, 2003). Additionally, the interviews can supply a set of realistic texts, i.e. the test-developer can ask questions planned in advance but unknown to the interviewees and in so doing to generate spontaneous responses.

5.3.2.2 Recruiting interviewees

In fall 2006, the researcher sent an email to the European Students Club on the campus of the focal university, an organization intended to bring together students with European backgrounds. The text of the email included a brief introduction to the study and a call for participation. The text explained that one of the parts of this study comprised interviews with French native speakers and invited interested students to contact the researcher via email.

5.3.2.3 Interviewees and interview procedure

Nine interviewees were accepted for an interview on ‘a first-come, first-served’ basis. The interviewees were two graduate and seven undergraduate students enrolled in various programs across the university with specializations in marketing, political sciences, nuclear or aerospace engineering, finance and business, and physical
anthropology. The group included four females and five males ranging in age from 20 to 30, all of whom came from various regions of France, i.e. Alsace, Auvergne, Normandy, Haute-Savoie, Picardie, Paris and Toulouse regions.

The one-on-one interviews were conducted on campus at times mutually agreeable to the interviewees and the researcher. The interviewees were asked to read and sign an informed consent form (see Appendix B) before the interview. Each interviewee was offered compensation in the amount of $70 for participation (funds for this were provided by a G. Watz dissertation Fellowship from the university’s Center for Language Acquisition. All nine interviews were digitally video- and audio-recorded in the fall semester 2006 (October-November). Each interviewee took part in one interview, the length of which varied from 2 to 3 hours. During the interview the native speakers responded to the same series of questions (see Appendix F) focused on the following topics: La maison; La famille; La cuisine; L’éducation; Les loisirs (activités culturelles et sportives); Le cinéma; La vie politique; La technologie; Les souvenirs et l’avenir.

5.3.3 Selection of video and audio texts

Once all of the interviews were completed, a subset of six interview segments to be used in the study was selected. The selected segments were based on the topic ‘Food’, which is a typical topic of most beginning or intermediate language course, including the one in question. In the chosen segments, the native speakers responded to two questions: (1) the differences/similarities between French and American eating habits and (2) the differences between French and American restaurants. In addition, two recordings from a French TV channel and a French radio station were chosen. The topic of the TV and
radio texts generally corresponded to the topic of food but the texts themselves differed in their respective genres. The TV text was a segment from a news program whereas the radio text was an advertisement. More precisely, the TV text was a news report recorded from the French channel ‘France 3’ entitled Marseille: non-fumeurs dans une brasserie [Marseille: no smoking in a restaurant]. The radio text advertised Léon de Bruxelles, a restaurant chain in France. The transcripts of the texts selected for the pre-test and post-test assessment sessions appear in Appendices G-N. All eight texts used in the assessment sessions are accompanied by an English translation.

5.4 Research methodology

5.4.1 Microgenetic analysis

This study adopts the microgenetic method as the general analytical framework. Given that the microgenetic method was conceptualized and developed within SCT, it particularly accounts for the theoretical and methodological principles of dynamic assessment, one of the key tenets of SCT. Additionally, this method is particularly suitable for the present study because it allows the tracking of learners’ development over a certain period of time.

Vygotsky and other SCT-oriented scholars in Russia (e.g. A.N. Leontiev, El’konin, Gal’perin, Davydov) concerned with children’s (learners’) development and education constructed and brought into practice a genetic method of research for tracing learners’ intellectual development. They proposed to study development ontogenetically and microgenetically with the purpose of uncovering its essence. The ontogenetic method
captures “how children appropriate and integrate mediational means, primarily language, into their thinking activities, as they mature” (Lantolf, 2000:3). This method is normally used to study psychological development during a period of several years and to find common tendencies in learners’ intellectual development as correlated with age (Davydov & Markova, 1992; El’konin, 1992). The microgenetic method primarily concerns “the reorganization and development of mediation over a relatively short span of time” (Lantolf, 2000:3). This method also adheres to the principles of active formation and recreation of the very processes of development and seeks to find ways of influencing developmental processes.

Recently the microgenetic method has been applied to a number of L2 studies (e.g. Donato, 1994; Lantolf & Aljaafreh, 1995; Belz & Kinginger, 2002, 2003; Kinginger & Belz, 2005; Vyatkina, 2007). Belz and Kinginger (2003:594) discuss the microgenetic method as “the observation of skill acquisition during a learning event” enabling researchers “to examine specific instances of the development”. In accordance with SCT methodological premises, this study examines the microgenetic development of L2 listening ability by tracing the history of a learner’s text comprehension over a two-month period of time.

5.4.2 Propositional analysis

5.4.2.1 Pausal Unit Analysis

In recent decades L2 reading research has implemented *pausal unit analysis*, initially proposed by Johnson (1970) as a measure of L1 reading comprehension
Johnson’s analysis is a propositional analysis system based on pausal units or breath groups. According to Lee and Ballman (1987), Johnson was the first to investigate the recall of prose as a function of the structural importance of the linguistic units, as “pause acceptability units” (Johnson, 1970:13). Three groups of university students participated in Johnson’s study. One group was asked to divide a text into linguistic (or verbal) units: the students were instructed that “the functions served by pausing might be to catch a breath, to give emphasis to the story, or to enhance meaning” (ibid., p. 13). A second group was asked to rate the designated linguistic units with respect to “their structural importance to the whole story” (ibid., p. 13). A third group was instructed to read a text twice and then to recall it in writing. The written text recalls were further rated to determine the linguistic units that had been recalled. The results of Johnson’s study demonstrated that the structural importance of linguistic units was a function of the recalls produced by the readers.

Johnson’s analysis (also termed linguistic units, information units, or idea units) was investigated and then recommended by many L2 researchers. For example, Bernhardt (1991: 209) acknowledges the usefulness of pausal unit analysis, and presents it as an analysis system based on pausal-breath units propositions, the endings of which “are generally found at the end of a syntactically related unit such as in the morning or The old man/ was happy/ above all/ about the information/ which he obtained/ recently.”
5.4.2.2 Recall tasks

An additional point regarding propositional analyses concerns recall tasks, usually associated with this type of analyses. L2 research views text recall tasks as an effective quantitative and qualitative measure of reading (e.g. Lee & Ballman, 1987; Bernhardt, 1983, 1991; Carell, Devine & Eskey, 1991; Appel & Lantolf, 1994; Roebuck, 1998; Heinz, 2004) and listening comprehension (e.g. Mueller, 1980; Markham & Latham, 1987; Long, 1990; Schmidt-Rinehart, 1994; Vogely, 1995; Elkhafaifi, 2005; Sadighi & Zare, 2006; Jung, 2003, 2007). The advantage of recall tasks for comprehension measurement is described by Appel and Lantolf (1994). They explain that the effect of this methodological tool “for assessing the extent to which readers have comprehended a text” resides in the fact “that text comprehension and recall are closely related in the sense that what readers understand from texts, they can also recall” (Appel & Lantolf, 1994: 439).

The present study also follows the methodological suggestions of L2 research that has explored the effects of L1 versus L2 text recalls and argues in favor of native-language recall tasks. A number of L2 studies reported that the participants were able to respond better to reading comprehension questions or to recall more of the reading passage when asked to complete the task in L1 than in L2 (e.g. Shohamy, 1984; Lee, 1986; Lee & Riley, 1990; Riley & Lee, 1996, Heinz, 2004). The advantage of text recalls in L1 is that they allow learners to demonstrate text comprehension without interference from their L2 production ability that may be weak, specifically at the beginning and intermediate levels (Bernhardt, 1983; Bernhardt & Berkemeyer, 1988; Heinz, 2004). L2 research specifies, however, that when using immediate recall tasks, researchers need to
keep in mind that subjects’ recalls in L1 may not always be worded the same way as original texts but the relationship between a recall and a text should be obvious (Heinz, 2004). Thus, this study adopts the methodological suggestions advanced by L2 research while implementing pausal unit analysis and recall tasks for assessing comprehension of L2 aural texts.

5.5 Research design

5.5.1 Mixed methods design

This study implemented a mixed method design, applying qualitative and quantitative approaches in order to conduct the pedagogical experiment and to report its results. The use of different methods was necessary to attain a comprehensive view of the research findings. Following a SCT-based DA framework, the study gives priority to a qualitative approach which is best suited to the ZPD concept. The theoretical and methodological premises underlying the ZPD research rest on Vygotsky’s (1998:204) suggestion that “we must not measure the child, we must interpret the child”. Vygotsky emphasized that the development of psychological functions ripening in the ZPD could be better observed only through dialogic interactions between the examiner and the child. In this regard, many SCT researchers advise basing the assessment of the ZPD on qualitative evaluation in order to shed more light on learners’ development (e.g. Kozulin, 1998; Minick, 1987; Lantolf & Thorne, 2006). A qualitative approach was applied to interpret the data obtained during the mediated portions (or learners’ mediated listening
recalls) of the DA and TA sessions. The qualitative analysis is presented in Chapter 7 and Chapter 8.

Despite a preference for qualitative analysis, and to supplement this approach, minimal quantitative analysis was also incorporated into the study in the form of frequency counts of mediation offered by the instructor and responsiveness to mediation provided by the learners. In addition, statistical analysis (one-sample rank test) of the number of propositions recalled by the participants following DA and the enrichment program sessions is considered in Chapter 6.

5.5.2 Design of the pedagogical experiment

In elaborating the design of the study, the methodological suggestions advocated by Poehner (2005) were taken into consideration (see chapter 4 for a discussion of Poehner’s work). Poehner’s study adopted an interactionist approach to DA. This approach privileges a “flexible interaction between the mediator and the learner as the two cooperatively perform the assessment task” (Poehner, 2005: 155). During the DA-based sessions Poehner (2005: 151) provided participants with mediation that “was not determined a priori and then applied to a given assessment” and depended “on the specific context of mediator-learner interactions”. In Poehner’s study, the mediation was manifest in a flexible mediator-learner interaction and entailed hints, prompts, questions, suggestions, and explanations determined by the mediator’s assumptions about learner needs and upon learners’ requests for mediation. The research design of Poehner’s study included four stages: 1. the pre-test; 2. the enrichment program; 3. the post-test; 4. transfer assessment sessions. The pre-test comprised two sessions, one non-dynamic and
one dynamic session (NDA1 and DA1). The enrichment program involved one-on-one tutoring sessions and was focused on learners’ problem areas identified during the pre-test stage. The post-test also included two sessions, NDA2 and DA2. Finally, in order to establish the extent to which participants could internalize and extend the mediation provided in the course of previous sessions, two transfer sessions were conducted (TA1 and TA2).

As in Poehner’s study, the present investigation has a pre-test/enrichment program/post-test design. Unlike Poehner’s study, however, this investigation includes more transfer sessions in order to track the development of learners’ text comprehension over an extended period of time. The ‘multiple transfers’ approach was inspired by Brown and her colleagues who viewed several transfer sessions as a highly desirable design feature of the DA framework (e.g. Brown & Ferrara, 1985, Campione, Brown, Ferrara, & Bryant, 1984). The goal of multiple transfer sessions is to uncover the learner’s ability to use (or transfer) newly acquired knowledge to ‘novel problems’ or contexts. For example, Campione et al. (1984) used a set of three transfer sessions conducted directly after the post-test. That is, to assess the ‘near transfer’, the test-takers are given problems that are based on the same principles as the original problems but are presented in new combinations; to test ‘far transfer’ and ‘very far transfer’, test-takers are invited to solve problems similar to the original but more complex. Following Brown and colleagues’ approach to DA, the present study involved four TA sessions, i.e. one ‘very near transfer’ session (TA1) one ‘near transfer’ session (TA2), one ‘far transfer session (TA3) and one ‘very far transfer’ session (TA4).
The specific procedure followed in this study was: first, the learners carried out the recall independently (e.g. NDA sessions) and then they repeated it but with mediation (e.g. all DA and TA sessions). In effect, during DA and TA sessions there were two opportunities to assess microgenetic listening development: independent listening performance and mediated listening performance (see also section 5.6. for a description of the assessment procedure). The data from each of these is presented separately in the analysis chapters. In chapter 6 quantitative analysis of independent recall of the propositional content of the selected texts is presented. In chapter 7 qualitative analysis of the mediational process through which the students and the mediator negotiated understanding of the relevant texts was carried out. Through this process the mediator was able to formulate fine-grained diagnosis of learner abilities, including most importantly, their problem areas with regard to listening comprehension. On the basis of the diagnosis obtained through mediated interaction the enrichment session was organized. The design of the study is outlined in Table 5-2.

5.5.3 Data collection and Transcription conventions

The data collection was conducted in spring semester 2007 and involved the following instruments: two open-ended questionnaires on students’ biographical and language learning history, the observation of students during the individualized assessment sessions. The interviews were intended to glean more insights into the participants’ language learning background and helped better interpret data obtained from the assessment sessions.
All study sessions, including the Enrichment Program sessions, were video- and audio recorded (approximately 80 hours of recordings). After the data collection, all recorded data were studied, transcribed (as needed) and analyzed.

The recorded data were transcribed using transcription conventions adapted from Johnson (1995). This conventions system accounts for various discourse-related features that arise during face-to-face interactions between the interlocutors (e.g. overlapping speech, pauses). The transcription conventions used in the study are listed in Appendix C.
Table 5-2: Experiment design: assessment and enrichment Program sessions

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>TASK DESCRIPTION</th>
<th>MATERIALS</th>
<th>MEDIATION OFFERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test : NDA 1</td>
<td>1. Listening to a text in L2; 2. Independent oral text recall in L1</td>
<td>Text 1 : A segment from an authentic interview (video format)</td>
<td>None</td>
</tr>
<tr>
<td>Pre-test: DA 1</td>
<td>1. Listening to a text in L2; 2. Independent oral text recall in L1 3. Oral text recall in L1 after mediation</td>
<td>Text 2 : A segment from an authentic interview (video format)</td>
<td>Flexible interaction with the mediator</td>
</tr>
<tr>
<td>Pre-test: TA 1 (very near transfer)</td>
<td>1. Listening to a text in L2; 2. Independent oral text recall in L1 3. Oral text recall in L1 after mediation</td>
<td>Text 3 : A segment from an authentic interview (video format)</td>
<td>Flexible interaction with the mediator</td>
</tr>
<tr>
<td>Enrichment program: 4 weeks (two tutoring sessions per week)</td>
<td></td>
<td>Flexible interaction with the mediator</td>
<td></td>
</tr>
<tr>
<td>Post-test: NDA2</td>
<td>1. Listening to a text in L2; 2. Independent oral text recall in L1</td>
<td>Text 4 : A segment from an authentic interview (video format)</td>
<td>None</td>
</tr>
<tr>
<td>Post-test: DA 2</td>
<td>1. Listening to a text in L2; 2. Independent oral text recall in L1 3. Oral text recall in L1 after mediation</td>
<td>Text 5 : A segment from an authentic interview (video format)</td>
<td>Flexible interaction with the mediator</td>
</tr>
<tr>
<td>Post-test: TA 2 (near transfer)</td>
<td>1. Listening to a text in L2; 2. Independent oral text recall in L1 3. Oral text recall in L1 after mediation</td>
<td>Text 6 : A segment from an authentic interview (video format)</td>
<td>Flexible interaction with the mediator</td>
</tr>
<tr>
<td>Post-test: TA 3 (far transfer)</td>
<td>1. Listening to a text in L2; 2. Independent oral text recall in L1 3. Oral text recall in L1 after mediation</td>
<td>Text 7 : A segment from an authentic TV text (video format)</td>
<td>Flexible interaction with the mediator</td>
</tr>
<tr>
<td>Post-test: TA 4 (very far transfer)</td>
<td>1. Listening to a text in L2; 2. Independent oral text recall in L1 3. Oral text recall in L1 after mediation</td>
<td>Text 8: An authentic radio text (audio format)</td>
<td>Flexible interaction with the mediator</td>
</tr>
</tbody>
</table>

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49 Partially adapted from Poehner (2005).
50 Mediation or Flexible interactions involved researcher’s leading questions, implicit and explicit hints, prompts, explanations.
5.5.4 Text comprehension measurement

To measure comprehension, this study implemented immediate oral text recalls (see 5.4.2). The participants were asked to recall in their L1 (English) as much as they could of what they had just listened to with a special focus on the main ideas of the text. Then, the researcher identified the relationship between propositions (idea units) of the original text and the texts of participants’ recall. In this fashion, propositions from students’ immediate oral recalls that were closely related to propositions from the original text were counted and scored against the list of idea units designated independently by the raters before the study. The number of recalled idea units was viewed as evidence of text comprehension.

5.5.4.1 Identifying the idea units

Two groups of expert users of French worked independently to identify the idea units of the aural texts selected for the study. Following the procedure outlined in Johnson (1970) and Bernhardt (1991), the raters of the first group worked independently in order to divide the texts into ideas units (or propositions). That is, three fluent users of French listened to the texts and marked all those places in the texts where the speakers paused. The idea units corresponded either to basic semantic propositions or simple phrases. The results of the procedure were not consistent for all eight texts used in the study and the consensus on the number of idea units was achieved through discussion.
As suggested by Bernhardt (1991), the second group weighted each proposition identified by the first group according to their importance in the structure of the selected aural texts. Working independently, the three raters of the second group ranked the propositions into main ideas, supporting ideas and details according to the idea unit analysis proposed by Lee and Riley (1990), Riley and Lee (1996). As in the first instance, the results of this procedure were not consistent for all eight texts and the agreement on the important level of the idea units was reached after conferencing with all three raters of the second group.

Table 5-3 exemplifies the measurement instrument against which the learners’ oral recalls was scored during the NDA1 session. The text used in the NDA1 session was first divided into 28 propositions and then into 23 idea units (IU). There were in total two main ideas (M), six supporting ideas (S) and fifteen details (D).

Although the text contains 28 propositions, the total number of M, S and D idea units is only 23. This situation is due to the redundancy of spoken discourse. In this aural text, the speaker repeated the same ideas twice. The repeated ideas were counted as one, even though sometimes the same idea appeared in different lines (Example 5-1 – Main

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51 For the readers’ convenience, the full version of the NDA1 text (translated into English) is presented here (see also Appendix G):

I think that … a big difference it’s… Americans like super-complicated things. Well … with… not complicated in the sense of taste et cetera but for example a pizza. Here people like pizzas … the more toppings, the better they have things on the top, the better pizza is, or the more things they have in a sandwich, the better is. So, they adore putting thirty thousand things in a sandwich…While in France it’s really simple (laughter). It’s ‘ham-cheese’ or ‘tomatoes-mozzarella’, or on a pizza it’s, most of the people that I know when we go to a restaurant and even speaking of choices that we have, it’s uhm… ‘Margarita’ or mushrooms, ham…While here…it’s really like ‘pineapple, pepperoni and stuff’ and this is … well I didn’t… but I don’t like it at all because I think that here it’s always the more you have, the better it is. While in France I think the cuisine mentality is about simplicity which finally makes things better. Thus, I think that this is a difference.
Idea; Example 5-2 – Supporting Idea) or the wording of the ideas was not identical
(Example 5-3):

Example 5-1:

M(2).  11. *alors qu’en France c’est vraiment très simple* /
M(2).  24. *alors que je pense qu’en France c’est vraiment la mentalité au niveau de*
M(2).  25. *de la cuisine c’est la simplicité*

Example 5-2:

S(3).  8. *le plus y a des choses dessus le mieux c’est* /
S(3).  23. *le plus il y en a le mieux c’est* /

Example 5-3:

S(6).  26. *donne les choses* /
S(6).  27. *enfin rend les choses meilleures en fait* /

Thus, each aural text was also analyzed in terms of its propositional redundancy.

This procedure was applied to all eight texts used in the assessment sessions.
Table 5-3: Sample scoring instrument based on the idea units of the text used for NDA1 session.

<table>
<thead>
<tr>
<th>Idea Units</th>
<th>Lines</th>
<th>The text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>D1.</strong></td>
<td>1.</td>
<td>et puis aussi je pense que /</td>
</tr>
<tr>
<td><strong>M(1).</strong></td>
<td>2.</td>
<td>une grande différence c’est /</td>
</tr>
<tr>
<td><strong>M(1).</strong></td>
<td>3.</td>
<td>les Américains aiment les choses super-compliquées /</td>
</tr>
<tr>
<td><strong>S1.</strong></td>
<td>4.</td>
<td>enfin avec pas au niveau compliquées /</td>
</tr>
<tr>
<td><strong>S2.</strong></td>
<td>5.</td>
<td>dans le sens des gouts et cetera/</td>
</tr>
<tr>
<td><strong>D2.</strong></td>
<td>6.</td>
<td>mais par exemple une pizza /</td>
</tr>
<tr>
<td><strong>D3.</strong></td>
<td>7.</td>
<td>ici les gens aiment les pizzas/</td>
</tr>
<tr>
<td><strong>S(3).</strong></td>
<td>8.</td>
<td>le plus y a des choses dessus le mieux c’est /</td>
</tr>
<tr>
<td><strong>D4.</strong></td>
<td>9.</td>
<td>ou le plus il y a des choses dans un sandwich le mieux c’est /</td>
</tr>
<tr>
<td><strong>D5.</strong></td>
<td>10.</td>
<td>donc ils adorent mettre trente milles choses dans un sandwich et /</td>
</tr>
<tr>
<td><strong>M(2).</strong></td>
<td>11.</td>
<td>alors qu’en France c’est vraiment très simple /</td>
</tr>
<tr>
<td><strong>D6.</strong></td>
<td>12.</td>
<td>c’est ‘jambon-fromage’ /</td>
</tr>
<tr>
<td><strong>D7.</strong></td>
<td>13.</td>
<td>‘tomate-mozzarella’ ou sur une pizza c’est /</td>
</tr>
<tr>
<td><strong>D8.</strong></td>
<td>14.</td>
<td>la plus part des gens que je connais /</td>
</tr>
<tr>
<td><strong>D9.</strong></td>
<td>15.</td>
<td>quand on va dans un restaurant</td>
</tr>
<tr>
<td><strong>S4.</strong></td>
<td>16.</td>
<td>et même au niveau des des choix qu’on a /</td>
</tr>
<tr>
<td><strong>D10.</strong></td>
<td>17.</td>
<td>c’est ‘Margarita’ou champignons jambon /</td>
</tr>
<tr>
<td><strong>D11.</strong></td>
<td>18.</td>
<td>alors que ici c’est vraiment/</td>
</tr>
<tr>
<td><strong>D12.</strong></td>
<td>19.</td>
<td>‘ananas / pepperoni – machin’ /</td>
</tr>
<tr>
<td><strong>D13.</strong></td>
<td>20.</td>
<td>et ça je enfin /</td>
</tr>
<tr>
<td><strong>D14.</strong></td>
<td>21.</td>
<td>moi enfin j’ai pas été élevée là-dedans/</td>
</tr>
<tr>
<td><strong>S5.</strong></td>
<td>22.</td>
<td>mais j’aime pas du tout ça parce que je trouve que c’est toujours /</td>
</tr>
<tr>
<td><strong>S (3).</strong></td>
<td>23.</td>
<td>le plus il y en a le mieux c’est /</td>
</tr>
<tr>
<td><strong>M(2).</strong></td>
<td>24.</td>
<td>alors que je pense qu’en France c’est vraiment la mentalité au niveau</td>
</tr>
<tr>
<td><strong>M(2).</strong></td>
<td>25.</td>
<td>de euh de la cuisine c’est la simplicité</td>
</tr>
<tr>
<td><strong>S (6).</strong></td>
<td>26.</td>
<td>donne les choses /</td>
</tr>
<tr>
<td>**S,(6)</td>
<td>27.</td>
<td>enfin rend les choses meilleures en fait /</td>
</tr>
<tr>
<td><strong>D15.</strong></td>
<td>28.</td>
<td>donc ça je pense que c’est une différence</td>
</tr>
</tbody>
</table>

=================================================================================================

M -2
S – 6
D – 15
Total IUs: 23
This instrument against which the learners’ recalls were measured was applied to
the eight texts used in the study. The texts divided into idea units, i.e. main ideas,
supporting ideas and details, indentified by the raters are included in the Appendices G-
N.

5.5.4.2 Oral recalls scoring and analysis

The oral recalls of the learners were analyzed by the researcher for the total
number of idea units (IU) accurately produced and subsequently for the number of main
IUs, supporting IUs and details recalled. The recalls were scored against the list of IUs
and only the information explicitly stated in the aural text was counted. That is,
paraphrases were allowed because the recalls were produced in English, the learners’ L1.
The following example from Fée’s data provides an illustration of a successful
paraphrase:

Fée (DA1 session)

The speaker said:

M5 23. et les légumes sont très manquent de gout
and vegetables don’t have any taste
D10 24. … sont très...
… they are…
S7 25. on a l’impression de manger de l’eau
I have the impression that I’m eating water
D11 (M5) 26. ça a pas forcément de goût
They don’t have any taste

This passage from the DA1 text was recalled by Fée as follows:
… and … he said vegetables are lacking taste and have a lot of water or something like that …

Following Lee and Riley (1990) and Riley and Lee (1996), a strict criterion of recall scoring was elaborated in order to eliminate distortions from the original text because (1) the information was not recalled correctly or (2) the information was not embedded in the text. The following excerpt from Mona’s data offers an example of what was counted as information recalled incorrectly.

**Mona (DA1 session)**

The speaker said:

M7 31. *autrement ce que je mange ici [in the US] d’habitude beaucoup de...*
    otherwise what I usually eat here [in the US]… a lot of...
M7 32. *de pizzas d’hamburgers de desserts*
    pizzas, of hamburgers, of desserts

Mona recalled this idea unit as follows:

and Americans eat a lot of fast food… he said burgers and … uhm… pizza…

This excerpt demonstrates that Mona captured the speaker’s idea of fast food and recalled correctly the words ‘burgers’ and ‘pizza’ mentioned by the speaker; however, she confused the subject (it was the speaker himself and not Americans). Additionally, the expression ‘fast food’ was not actually used by the speaker in his interview. Thus, the recall of this idea unit was considered as incorrect.
In a similar vein, (1) the elaborative (logical) inferences and (2) the embellishments of the texts were considered as distortions from the original text content and were not taken into consideration in the recall scorings. For example:

(1) Elaborative (logical) inferences

Fée (TA1 session)

The speaker said:

M3  10. *et puis les repas sont plus longs [en France]*
    and then meals take more time [in France]
S3  11. *on passe plus de temps à table*
    people spend more time sitting at the table
D6. 12. *donc on y avoir... y a pas forcement une entrée avant chaque plat*
    thus, there will be… there are no always appetizers before the main dish
S4  13. *mais on va manger le plat*
    but people eat the main dish
S5  14. *puis euh... le fromage et un dessert qui va être généralement un fruit ou un yaourt*
    then uhm… cheese and a dessert which is generally a fruit or a yogurt

The recall of this passage produced by Fée includes a logical inference “in the United States it’s faster”, i.e. the recall contains the information that was not encoded in the text itself.

    I think that’s what she said… and uhm... she said that like the actual meal is different… it’s longer in France and… in France you’ll eat your dish and then you’ll eat cheese... and then dessert and fruit whereas in the United States it’s faster…

(2) Embellishments of the texts

Lora (DA2 session)

The speaker said:

S1  5. *parce qu’en France le pourboire est inclus*
because in France the tip is included

6. donc y a pas euh y a pas autant de... de... d’importance accorder au service
so there is no... uhm... there is any really importance related to the service

D1 7. pas que le service est mauvais en France mais bon il n’est pas non plus
it doesn’t mean that the service is bad in France but, well, it is
8. génial mais bon...
not awesome either... but well...

The line 7 was recalled by Lora as follows:

the servers are very… nice and gracious … in France and…
they allow you to take your time

The recall of lines 7 and 8 was modified by the learner and shows that she was
trying to embellish the speaker’s idea (e.g. nice and gracious) and to bridge the gaps on
the basis of the words that she understood.

The single words heard and recalled by the learners also were not taken into
consideration in recall scoring, if these words did not reflect any idea or detail of the text
content. For example:

Michel (DA1session)

The speaker said:

M1. 1. j’ai remarqué que les petits déjeuners étaient très riches donc sucré-salé
I noticed that breakfasts [in the US] are rich here, sweet and salty
M2. 2. alors qu’en France ça serait plutôt sucré
while in France breakfast is mainly sweet

Michel recalled these two idea units as follows:

First he says something about the breakfast and how French …
The recall of the above idea units demonstrates that Michel picked up only one of these, i.e. *les petits déjeuners* (breakfasts), but was unable to understand the idea of the speaker. In fact, the speaker made a point concerning the concept of the breakfast in France, which is typically sweet and American breakfasts, which can be salty, sugary or a mixture of both. For this reason, this kind of recall was not counted in the analysis.

5.5.5 Texts selection criteria

While selecting authentic texts for this study, the following methodological suggestions were taken into consideration:

1. The maximum length of each text should not exceed 90 seconds. This time-span is due to “limitations to short-term memory that occur after about 60 to 90 seconds of listening” (Rost, 2002:145). Thus, all texts used in the study were between 01:00 and 01:20, except for the radio advertisement text (TA4 session) whose length was 20 seconds in real time;

2. All texts used in the pre-test and post-test assessment sessions were similar but not the same. In order to assess learners’ ability to ‘transfer’ what they internalized during the study sessions, all texts were related to the same topic (Food) and in that sense they were similar but included various degrees of difficulty (see section 5.6.2);

3. The relevance of the texts to the requirements of the intermediate course in question. That is, the students were enrolled in the course that required them to listen to authentic aural texts;
4. The relevance of the texts’ content to the current life of the target L2/C2 community. In this study, the authentic video/audio materials were chosen in a way that their social and cultural content could give an adequate representation of the L2/C2 community. It was expected that these materials would help students to avoid creating stereotypes and to become aware of particularities of French reality in its diversity.

5.5.6 Task characteristics

All sessions were organized around the following tasks. At the outset of each assessment session the learners were told that they had to listen to the text twice, try to understand it and then to recall it orally. More precisely, the learners were instructed that they should focus their recalls on the main ideas of the text and provide some supporting ideas along with some details.

During the two NDA sessions, the participants listened to the selected texts in French but they recalled the texts in English and performed the task independently, i.e. without mediation. In the course of DA and TA sessions, the learners first listened to the texts and recalled them independently. Then, DA and TA sessions were administered dynamically and engaged the learners in dialogic interactions with the researcher. More precisely, the participants were instructed as follows:

First, you will listen to a text in French twice. Second, when you have finished listening to the text, recall this text in English. When recalling the text, try to focus on the main ideas and provide supporting ideas and details of the text.
During the portions of DA and TA sessions that involved mediation, i.e. following independent performance, the participants received additional instructions. They were informed that they could listen to the text as many times as they needed and were encouraged to ask questions.

We will listen to this text again. The text contains small parts and we will listen to each part separately. Please note: you can listen to these parts as many times as you need. We can interrupt listening at various points and I will provide you with necessary help and explanations concerning the text content. If, for some reason, you do not understand well some passages of the text, I encourage you to ask me questions. Your questions can be related to grammar, vocabulary, phonology or cultural details. You can ask questions in English or in French.

At the end of each DA and TA session, the participants were asked to recall the text again in order to verify their comprehension of the text in question.

5.6. The assessments and the enrichment program

5.6.1 Procedure

All assessment sessions and the enrichment program (EP) sessions took place within a nine-week period (February 5 – April 7, 2007, excluding the week of spring break: March 12-16). The assessment sessions were conducted on an individual basis whereas the EP sessions were conducted in a group format. The study sessions ran as follows:

Week 1 – NDA1 → DA1

Week 2 - TA1
Weeks 3 – 6 – the enrichment program (4 weeks period)

Week 7 – NDA 2 → DA 2

Week 8 – TA 2 → TA 3

Week 9 – TA 4

The study began with a set of the pre-test assessment sessions, which included three forms of assessment: non-dynamic assessment (NDA1), dynamic assessment (DA1) and transfer assessment (TA1). During these initial assessment sessions, participants listened to three similar excerpts from video interviews in which the speakers discussed the topic ‘American and French eating habits’. The results from the pre-test assessment sessions were analyzed in light of the problems encountered by participants when recalling the selected texts (see Chapter 7 and Chapter 8). It should be pointed out here that NDA1, based on independent performance, was far more difficult for diagnosing problem areas than DA1 or TA1 that involved flexible mediator-learner interactions. Thus, the problem areas (phonology, cultural knowledge, vocabulary or grammar) were primarily determined on the basis of learner’s listening performance in the DA1 and TA1 and partially in the NDA1. The outlined problem areas were used to structure the enrichment program which was intended to help the learners overcome these problems.

The post-test assessment sessions (NDA2, DA2, TA2) followed the enrichment program and rounded out the study. The NDA2, DA2 and TA2 sessions were identical to the pre-test assessment sessions in terms of assessment procedure and text similarity (same topic and format, different speakers). The learners listened to three video texts in which the speakers compared American and French restaurants as well as dining customs.
Two transfer assessments (TA3 and TA4) were then administered. During TA3 participants were provided with an authentic video text of a different genre (a segment from a TV-news program) whereas in the course of TA4 they listened to an authentic audio text (a radio commercial) which offered more variety in genre and format.

5.6.2 The NDA, DA and TA assessments

The purpose of the NDA1 and NDA2 sessions was to evaluate the participants’ actual level of text comprehension. That is, during these sessions participants listened to the selected interview segments, recalled the texts and received no mediation while completing these tasks.

The DA1 and DA2 sessions were intended to evaluate the potential level of the students’ L2 listening abilities. The participants listened to interview segments that, in terms of topic, were similar to NDA1 and NDA2 interview segments, were involved in teacher-learner interaction and were offered mediation in accordance with the interactionist approach to DA. Given that within DA assessment is inseparable from instruction, participants were also provided with hints, prompts or explicit explanations when needed for better text comprehension.

This study included four transfer sessions: TA1, TA2, TA3 and TA4. TA sessions included transfer of two types, independent\(^{52}\) and mediated performance, and, in this sense, TA sessions were similar to DA sessions. However, transfer assessments differed in the following ways. First, the purpose of TA sessions was to determine the signs of

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\(^{52}\) That is, the learners first performed independently and it is this performance that is considered in the analysis of Transfer (see chapter 6).
development in the learners’ ability to understand authentic aural language. TA1 and TA2 sessions were intended to test immediate changes regarding the students’ listening ability and were conducted after DA1 and DA2 sessions respectively. TA3 and TA4 sessions examined the extent to which the learners could recontextualize their listening ability improved through their mediated interactions with the researcher in the course of all sessions of the study, including the enrichment program. Second, the texts used in TA sessions differed from the NDAs and DAs texts. The video segment for TA1 was similar to NDA1 and DA1 segments and the TA2 segment was similar to NDA 2 and DA 2 video segments in terms of topic but slightly different in terms of content. TA3 and TA4 were designed as far and very transfer sessions and involved more complex and different texts. The video text for TA3 (a TV-news segment) had the same topic and the same format as the previous segments; however, it was different in genre and in this sense, more complex than the texts used in the previous sessions of the study. The text for TA4 session was a radio advertisement related to the same topic (restaurants) but varied in genre and format differing in a more substantial way from the texts used in preceding assessments.

5.6.3 The enrichment program

5.6.3.1 The enrichment program: procedure

The enrichment program (EP) was held for a period of four weeks and included two tutoring sessions per week. All the EP sessions were conducted in a group format.
The participants were divided into two groups depending on their availability and attended eight tutorials. The first group consisted of three learners: Erica, Lora and Michel, and the second comprised four learners: Chris, Dan, Féé and Mona.

Similar to DA and TA sessions, the EP activities were carried out dynamically and involved mediated interactions with the intention of promoting learners’ L2 development. In the course of the EP sessions, the participants listened to various segments (in audio format) taken from the collection of texts gathered for the study. Typically, the EP sessions involved researcher-learners and learner-learner collaborative dialoguing. During these sessions the learners normally listened to two texts and then orchestrated text recalls.

The major focus of the EP sessions was on the participants’ problem areas determined during the pre-test sessions. These initial sessions, more specifically the first two mediation-driven sessions (DA1 and TA1), revealed that while listening to the texts, all the learners exhibited problems not only with the texts’ cultural references (as expected) but also with the linguistic features related to vocabulary, grammar, and above all, phonology. Quite understandably, for the most part, vocabulary and grammar difficulties varied from participant to participant. With regard to phonology, however, all participants experienced almost identical difficulties and therefore this L2 area required focused instruction.

In view of the fact that L2 phonology proved to be a specific source of difficulty leading to poor text comprehension, it was decided that the primary goal of the EP sessions would be to familiarize the learners with the phonological features of spoken French. Thus, the EP sessions focused primarily on this area. However, other areas also
created some problems for the students. These included L2 cultural references, lexis or grammar depending on a particular text. In this fashion, the EP sessions aimed to overcome cultural, lexical, morphosyntactic and phonological difficulties by means of explicit instruction, practice, the researchers’ immediate feedback or comments, and group discussions.

5.6.3.2 The enrichment program: human and symbolic mediation

In contrast to DA and TA sessions that were based only on one source of mediation (i.e. the researcher herself), the EP involved additional mediational sources, i.e. human mediators (the researcher and the learners) and symbolic mediators (dictionaries, handouts in electronic format, examples from the oral texts). The learners were free to consult any available symbolic tool and to ask the researcher questions in order to redress the problems that arose during the discussions of texts. Because the EP sessions were conducted in a group format, the learners frequently mediated each other, helping their peers to overcome problematic areas (mainly with lexical difficulties) encountered throughout the text discussions. In summary, the instruction provided throughout the Enrichment Program was sensitive to learners’ L2 ZPDs and sought to broaden, and for some learners to create (in the case of Lora and Michel), their ZPD related to L2 listening comprehension.
5.6.4 Understanding spoken French

The examination of the relevant research shows that intermediate and even advanced students typically experience difficulties with understanding spoken language as it is used in the target L2/C2 community. Many researchers explain this situation by noting the exclusion of authentic oral discourse from language textbooks and instruction, despite their communicative orientation (e.g. Joseph, 1988; Di Vito, 1991; Valdman, 1992, Glisan & Drescher, 1993; Kinginger, 1998; Duran & McCool, 2003). This is particularly relevant for French language instruction because “the French (and many French teachers) uphold the "pure" forms of the written variety as the ideal to which all should aspire” (Kinginger, 1998: 510). Underlying such instructional orientation is the faith that the spoken forms, “despite their widespread use [by educated native speakers], are officially marked as not preferred and are sociolinguistically stigmatized” (ibid., p.510). The following paragraphs exemplify the consequences of these instructional practices and beliefs for L2 acquisition as presented in Kinginger (1998).

Kinginger (1998) captures the difficulties experienced by L2 intermediate learners concerning spoken French comprehension within the context of the ZPD. Her study reports on a classroom interaction via videoconferencing between L2 French fifth semester university students in the U.S. and L2 English learners in France. The focus of the course in question was French/American intercultural communication with practice in writing (all students had an email partner) and in speaking (during two 60 minute videoconferences students were to ask and answer questions about the course materials). The videoconference interactions were structured in advance and represented ‘a set of
prepared questions’, designed with the intention of generating conversations. During the first half hour of the conference students spoke French and during the second half hour they spoke English. The article concentrates on the part of the videoconference that took place in French.

Analyzing spoken interactions between American and French students, Kinginger (1998:502) notes that peer-peer collaboration in French resulted in a difficult and face-threatening event for most of the American participants because much of the conference took place in a language that was “beyond these learners' capability” (p. 502). Kinginger argues that this situation is due in part to “heightened language classroom anxiety, and in part to differences between the variety of French learned in American schools and the French spoken by educated native speakers” (ibid., p.502). She points out that even though American students used the written agenda and their talk was pre-structured, they could not profit from the peer-to-peer interaction and assistance provided by native speakers. She explains this observation in light of the pedagogical value of the ZPD. Kinginger claims that the students’ language ability was inadequate to the task and was not in the learners’ ZPDs because they had never been exposed to spoken French before this telecollaborative classroom event.

In the separate lessons that followed the videoconference, the American students were offered the opportunity to analyze their interactions with their French counterparts. The procedure entailed the following activities: reading the transcript and watching the conference videotape. The activities also included the examination of spoken forms produced by French peers “until comprehension was achieved and the relevant features of the spoken language had been illustrated and discussed” (Kinginger, 1998:510). The aim
of this examination was to broaden the learners’ ZPD through the formation of “a more refined concept of spoken French and of language varieties in general” (ibid., p.511)

The design of the Enrichment Program in this study followed the conceptual approach proposed by Kinginger (1998). In fact, the development of conceptual understanding of a school subject is a key SCT pedagogical approach to teaching/learning (e.g. Leontiev, 2003; Lantolf, 2007b). For this reason, the present study aimed to develop an adequate concept of language varieties and a conceptual understanding of spoken French structures that routinely challenge text comprehension abilities of L2 learners. The qualities of spoken French covered during the EP sessions are briefly reviewed in the next section.

5.6.5. Spoken French: a conceptual approach

Following SCT pedagogy, the EP designed for the present study started instruction from conveying the basic theoretical concepts of spoken French. It was expected that a theoretical understanding of L2 spoken forms would enhance students’

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53 The distinction between theoretical (scientific) and spontaneous (every-day) concepts is at the heart of Vygotsky’s educational theory. Within SCT, theoretical concepts are seen not as definitions or terms but as a model on the basis of which different ways of problem solving could be developed (Nechiporenko (1998). Formation of theoretical thinking (and such crucial components of it as reflection, analysis, inner plan of action) is at the core of SCT-oriented teaching/learning process. Theoretical thinking emerges when the necessity of finding a generalized way of orientation in a specific discipline is demonstrated to children from the very beginning of the study of this discipline/subject (Davydov and Markova, 1992). According to Davydov and Markova (ibid.), when such a generalized means of solving a large class of problems is found, many abilities and skills can be formed on this generalized theoretical basis. It is expected that as a result of theoretical thinking, children – when facing an unknown problem or task - learn to find a solution that is analogous to the class of related problems and to resort to different sources of knowledge in finding a solution. El’konin, an influential SCT scholar, insisted that “the result of the learning activity during which interiorization of scientific concepts takes place consists in changing first of all the learner himself, his development. In general, one could say that this change consists in the child’s gain of new abilities, i.e. new ways of operating with scientific concepts.” (El’konin, 1961, as cited in Davydov and Markova, 1992:12-13).
text comprehension. The EP was structured as follows. First, the researcher introduced the notion of written and spoken language and familiarized the learners with the main characteristics distinguishing these two forms of discourse (see Table 5-4).

Table 5-4: Characteristics of written and spoken discourse.

<table>
<thead>
<tr>
<th>Written Language</th>
<th>Spoken Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. is usually not spontaneous;</td>
<td>1. is most often spontaneous</td>
</tr>
<tr>
<td>2. is constructed at various moments;</td>
<td>2. is constructed at the very moment of speaking;</td>
</tr>
<tr>
<td>3. contains more complex syntax;</td>
<td>3. can be produced only once; what about syntax? It is usually less</td>
</tr>
<tr>
<td>4. can be re-written many times;</td>
<td>complex because it is an unplanned form of performance</td>
</tr>
<tr>
<td>5. tends to observe the rules;</td>
<td>4. cannot be “re-written”;</td>
</tr>
<tr>
<td>6. tends to be formal;</td>
<td>5. is usually redundant;</td>
</tr>
<tr>
<td>7. tends to be non-redundant;</td>
<td>6. is accompanied by <em>paralinguistic means</em> of communication such as intonation,</td>
</tr>
<tr>
<td>8. tends not to deviate from the language norms.</td>
<td>pauses, voice modulations, gestures, bringing additional information to listeners;</td>
</tr>
<tr>
<td></td>
<td>7. contains hesitations, false starts, the involuntary breaks, the grammatical</td>
</tr>
<tr>
<td></td>
<td>reconstruction of utterances, ellipses, repetitions;</td>
</tr>
</tbody>
</table>

Second, the researcher provided students with explicit explanations concerning the differences existing between written and spoken French, termed New French by Joseph (1988). The structural features of spoken French are presented in Tables 5-5 and 5-6 (adapted from Joseph, 1988, and Kinginger, 1998). The features (e.g. replacement of
nous by on, left and right dislocation\textsuperscript{54}) are illustrated with examples taken from the texts
used in the present study.

Table 5-5: Changes nearly completed in new French.

\begin{verbatim}
1. Loss of special interrogative word order
An example from a text (Les études) used in the study:
J'espère que ça va finir [les études] l'an prochain. C'est intéressant mais j'aimerais bien quand même avoir un boulot...Toi aussi j'imagine... t'a bossé avant de... oui ? C'était ou ?

2. Replacement of nous by on
An example from a text (La famille) used in the study:
Je dirais que... enfin... en ce moment nous [the members of the speaker's family] on est assez... heu... un peu partout. Moi je suis aux Etats-Unis et ma sœur elle est à Grenoble, et mes parents ils sont en Autriche. Du coup on est un peu... on est un peu partout. Mais bon, c'est... on a toujours été... on a pas mal voyagé. On est allé franchement... on a vécu en Chine, au Canada et même quand on était en France, on a... on est... on a pas mal déménagé.

3. Generalization of Ça as impersonal subject pronoun
An example from a text (Le cinéma) used in the study:
Ah, moi ça serait plus science fiction et comédies voila... oui comédies, science fictions. Ça peut être science-fiction du sens... Ça peut être aventure héroïques du "Seigneur des anneaux"... euh... 'Star wars', oui des choses comme ça.

4. Left and right dislocation
An example from two texts used in the study:
Left dislocation
moi je pense... pour moi personnellement... qui suis non-fumeur... je pense que c'est pas quelque chose pour moi de très bien dans la relation entre les gens...
Right dislocation
... y a des choses que j'aime par exemple dans la nourriture américaine... j'aime beaucoup le 'cheese-cake', c'est quelque... je sais pas comment... Je sais même pas comment ça se fait, le 'cheese-cake'.
\end{verbatim}

\textsuperscript{54} Left or right dislocation is a feature of spoken French characterized by Calvé (1985:230) as “a construction in which one element, usually a noun, is isolated either at the beginning or at the end of a sentence, while being represented in the body of the sentence by a pronoun: 1) Sa soeur, elle part demain. 2) Je l'ai remis sur l'aigere, ton livre.”
In addition to the features of spoken French outlined in Tables 5-5 and 5-6, the EP sessions included the analysis of specific phonological phenomena, i.e. liaison and schwa, as well as typical words and sounds used as fillers in spoken French. During the pre-test assessments, it was revealed that these phonological features and fillers hindered the text comprehension of all the learners. Therefore, during the EP sessions, the learners were offered necessary explanations and illustrations concerning these spoken discursive features. The following excerpts (Tables 5-7 and 5-8) from the materials used in the study exemplify these discourse phenomena:

Table 5-6: Changes well underway in new French.

1. Elimination of *ne*
   An example from a text (*Les voyages*) used in the study:
   *J’aime bien faire des week-ends en Europe, j’aime bien voyager par exemple aller à Londres ou aller à Berlin, dans les capitales européennes... c’est pas très loin, ça coute pas très cher...ou à Bruxelles aussi.*

2. Loss of impersonal *il* in some contexts
   An example from a text (*La maison*) used in the study:
   *Mais par exemple à Paris c’est souvent salon, salle à manger, cuisine, chambres et salles de bains. C’est vraiment efficacité... puisque comme les... euh... y a pas beaucoup d’espace, faut que tout soit confiné dans un espace.*

3. Phonetic reduction of subject pronouns
   An example from a text (*La famille*) used in the study:
   *... mon père a une carrière un peu compliquée...il est... il a travaillé pendant 30 ans avec une compagnie américaine en France [...] et maintenant en fait maintenant il est ... il travaille dans le tennis professionnel...i s’occupe ... il est agent ... donc, voila i voyage beaucoup ...*
Table 5-7: Phonological features.

1. Liaison
La plus part des gens que je connais quand on va dans un restaurant et même au niveau des choix qu’on a, c’est heu... ’Margarita’ ou champignons, jambon...

2. French schwa (also termed [ə] instable, [ə] caduc or [ə] muet)
Alors... typiquement au déjeuner j(e) vais manger fast-food quoi... enfin pas à MacDo mais un sandwich. j(e) vais dans un truc comme Panera ou des choses comme ça et j(e) mange un sandwich parce que j’ai pas l(e) temps de cuisiner chez moi.

Table 5-8: Discourse markers.

1. Sound filler
Euh...
c’est une grande maison, c’est une villa euh... qui est euh... presque au sommet d’une colline, en fait... et qui ... euh ... qui est relativement carrée de structure ...

2. Word fillers
Ben (well)
...ma famille ... ben... j’ai donc deux parents euh... qui sont séparés.

Enfin (used as a word-filler)
... les Américains aiment les choses super-compliquées enfin avec pas au niveau compliquées dans le sens des gouts et cetera ...

Alors (used as an utterance-starter)
... alors euh... j’ai plusieurs plats préférés alors dans ce sens... y a... Au niveau des viandes, j’aime bien le bœuf, la viande rouge.

Donc (used as an utterance-starter)
... ah, les professions ! Donc, mon père il est ingénieur, ma mère elle est secrétaire.

Quoi (used as an interjection without a real meaning)
... par rapport à une maison américaine, la plus grosse différence je pense que c’est que... y a pas d’air conditionné... mais bon on se débrouille quoi...
Finally, the EP sessions involved explanations concerning certain morphosyntactic structures typical of spoken French and frequently used by the French native interviewees in their oral productions. These verbal forms (Table 5-9) were not familiar to all the participants and caused comprehension problems

Table 5-9: Morphosyntactic structures.

<table>
<thead>
<tr>
<th>Je dirais que</th>
<th>Je dirais que... enfin... en ce moment on est assez... euh... un peu partout. Moi je suis aux Etats-Unis et ma sœur elle est à Grenoble, et mes parents ils sont en Autriche.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Au niveau de</th>
<th>.. autrement au niveau de la viande j’ai remarqué que c’était beaucoup de volaille et beaucoup de bœuf très peu de porc et jamais de lapin jamais de... de canard jamais des choses un peu plus recherchées.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Pour ce qui est de</th>
<th>... pour ce qui est du café pas beaucoup de remarques sauf qu’en France on préférera le petit expresso serré plutôt qu’un grand café dilué.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Par rapport à</th>
<th>... j’ai découvert aussi le bagel qui est... qui est assez étrange par rapport à c(e) qu’on peut manger en France parce que c’est assez salé. Alors qu’en France on est habitué plutôt au croissant et au pain au chocolat qui sont sucrés.</th>
</tr>
</thead>
</table>

| En fait (= actually) | ...et... qu’est-ce que j’ai... j’ai une autre sœur qui est ... euh... qui est pharmacienne mais qui est en fait se consacre a ses enfants, elle est mère de famille en fait. |

A final point relating to the enrichment program concerns its limitation. Due to time constraints, the EP sessions mainly focused on the conceptual presentation of spoken French forms and did not include French language pronunciation practice in
order to develop students’ phonetic discrimination ability. Obviously, this kind of phonological practice would provide the learners with the opportunity to develop a conceptual understanding of the French phonemic system, and to have more ear-training practice intended to improve recognition of French sounds through various discrimination exercises.

5.7 Summary

This chapter outlined the methodology and design of the study that flow directly from the research questions being pursued in this study. The adopted research methodology is grounded in a mixed methods approach allowing both qualitative and quantitative analyses. In this regard, the use of microgenetic analysis, as a primary methodological framework and of pausal units analysis, as a supplementary method, was also justified.

The chapter also covered research design and detailed the procedure used and conditions under which the various stages of investigations were carried out from the collection of listening materials, recruitment of participants, information on participants’ biographical and language learning background, data collection instruments, the purpose and administration of assessment sessions and the enrichment program. It further indicated how issues of comprehension measurement were addressed through the use immediate oral text recall task.

The design included the following stages: 1. the pre-test; 2. the enrichment program; 3. the post test; 4. transfer assessment sessions. The pre-test comprised one non-
dynamic, one dynamic assessment and one transfer session (NDA1, DA1 and TA1 respectively). The enrichment program involved eight tutoring sessions and was focused on learners’ problem areas identified during the pre-test stage. The post-test included three sessions: NDA2, DA2 and TA2. Finally, in order to establish the extent to which the participants could internalize and extend the mediation provided in the course of previous sessions, one ‘far transfer’ session (TA3) and one ‘very far transfer’ session were conducted (TA4).

The final part of the chapter provided an overview of the enrichment program. Following SCT-based pedagogy that emphasizes the central role of scientific concepts for an individual’s intellectual development, the enrichment program sought to form a conceptual understanding of spoken French as a language variety.

The study involved a series of successive individualized assessment sessions in which learners were provided with the possibility of listening to authentic texts during a relatively long period of time. The results from the assessment sessions were analyzed in order to diagnose the problems encountered by the learners when recalling the oral texts and are presented in the three subsequent analysis chapters. That is, Chapter 6 provides qualitative and quantitative reports on the learners’ independent text recalls. Chapter 7 analyzes learners’ mediated text recalls and flexible researcher-learner interactions which were sensitive to learner’s ZPD. Additionally, the chapters 6 and 7 provide a detailed description of the participants’ individual problem areas and the differences in their microgenetic development of L2 listening ability observed during the pre-test and post-test assessment sessions. Both chapters trace microgenetic development of learners’ L2
listening ability by looking at their independent and mediated text recalls completed throughout transfer assessment sessions.
Chapter 6

Unassisted Listening Performance: Indentifying the Actual Level of Development

6.1. Introduction

As stated in the introductory chapter, the main purpose of this study is to investigate the diagnostic capacities of DA as well as the effects of DA-based instruction on the development of listening proficiency in intermediate university learners of French as a foreign language. Based on this, a series of quantitative and qualitative analyses was performed. The quantitative methods were used in order to investigate the product of listening (Chapter 6) whereas the qualitative methods targeted the process of listening comprehension (Chapter 7 and Chapter 8).

This chapter presents the results of the quantitative analysis carried out by means of descriptive and inferential statistical measures. This analysis gauges the learners’ unassisted listening recalls performed during the pre-test and post-test assessment sessions of the study. In order to carry out quantitative analysis, data of unassisted recalls are presented in aggregation (6.3 and 6.4) and disaggregation (6.5). Therefore, the chapter is subdivided into two main parts (aggregated and disaggregated data analyses) and a final summary. Section 6.2 briefly describes details concerning the data subset analyzed in this chapter. Section 6.3 presents the results of the descriptive statistical analysis of the number of idea units (IUs) produced by the learners independently. This analysis was performed in order to ascertain learners’ developmental trajectory observed
during the assessment sessions. All subsections in 6.3 present the analyses of each stage of the study, i.e. the pre-test, the post-test and the two final transfer sessions. Section 6.4 reports on the results of the inferential statistical analysis and compares the significance of mean differences between the independent recalls produced at the beginning of the study, before any DA intervention, and independent recalls produced in four transfer sessions following DA. This is designed to track any micro-gains of learners’ listening development. These micro-gains were gauged through the quantitative analysis performed using paired t-tests. Section 6.5 provides disaggregated data analysis and examines raw counts of IUs produced by each learner independently. The results for unassisted listening recalls are summarized in section 6.6.

6.2 Focal study data subset: unassisted listening performance

As indicated in Chapter 5, each pre-test/post-test/transfer session normally involved two stages: (1) independent (unassisted) performance, conducted non-dynamically, and (2) mediated performances carried out dynamically (except for NDA1 and NDA2 which consisted only of the first stage). In order to distinguish between independent and mediated performances that occurred during all DAs and TAs, these performances will be labeled as ‘IP’ (= independent performance), e.g. DA1-IP, or TA2-IP, and as ‘MP’ (= mediated performance), e.g. DA1-MP, or TA4-MP.

It should be emphasized that this chapter examines solely the portion of each assessment session that involved the learners’ independent performance and focuses on the product of listening development. The mediated performance subset grounded in DA
intervention (i.e. the second portion of study sessions) is analyzed in Chapter 7 and Chapter 8 using a qualitative approach with a special focus on the process of listening development and the learners’ ZPD. The reason for this is that the product of development can be better portrayed using quantitative measures whereas the process of development can be mainly captured through a qualitative analysis. The qualitative analysis of the process of development is grounded in Vygotsky’s writing on the relationship between the ZPD assessment and development. Vygotsky argued that while working within the ZPD the focus of assessment should be on the interpretation of learners’ abilities and not on their measurement, i.e. the examiner should seek “to penetrate into the internal causal-dynamic and genetic connections that determine the process itself of mental development” (Vygotsky, 1987:203).

Thus, the quantitative analysis presented in this chapter takes into consideration only the idea units contained in the original text and reproduced by participants without mediation. The purpose of this analysis is to trace the changes in the number of idea units recalled during independent performance. These changes are interpreted here as a quantitative measure of development that accrued from the mediated sessions.
6.3 Unassisted recalls: aggregate data analysis

6.3.1 Preliminary analysis of central tendencies and variability in the aggregate independent recalls

The descriptive statistics (the mean, median, standard deviation and range) for total number of acceptable idea units (IUs) recalled independently per each assessment session are displayed in Table 6-1.

Table 6-1: Descriptive statistics for independent recall of idea units during study sessions.

<table>
<thead>
<tr>
<th>Sessions</th>
<th>Pre-test</th>
<th>EP</th>
<th>Post-test</th>
<th>Transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NDA1</td>
<td>DA1</td>
<td>TA1</td>
<td>EP</td>
</tr>
<tr>
<td># of IUs per text</td>
<td>23 IUs</td>
<td>32 IUs</td>
<td>27 IUs</td>
<td>EP</td>
</tr>
<tr>
<td>Mean</td>
<td>3.71</td>
<td>2.85</td>
<td>6.14</td>
<td>EP</td>
</tr>
<tr>
<td>Median</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>EP</td>
</tr>
<tr>
<td>Range</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>EP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.48</td>
<td>1.67</td>
<td>1.86</td>
<td>EP</td>
</tr>
</tbody>
</table>

Note. N = 7; IUs = idea units; NDA = non-dynamic assessment; DA = dynamic assessment; TA = transfer assessment; EP = enrichment program; IP = independent performance, e.g. DA1-IP = the first portion of dynamic assessment during which the learners produced an independent recall.

This descriptive information capturing the independent L2 listening behavior of the learners can be interpreted as follows. The comparison of means demonstrates that the number of idea units recalled during each of the post-test sessions and the TA3-IP session were generally higher than those recalled during the first pre-test (NDA1 and

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55 The descriptive information in Table 6-1 presents only IUs productions produced independently and does not include the results obtained during mediated portions of DA and TA sessions.
DA1-IP\textsuperscript{56} and the final (TA4-IP) sessions. However, an increase in the number of IUs recalled was already observed at the beginning of the study, during TA1-IP, the last pre-test session\textsuperscript{57}. On the other hand, TA4-IP, the final session of the study, represents an abrupt drop in the learners’ production of acceptable IUs. The results of TA4-IP are explained later in the chapter (see 6.3.3.3 and 6.4.4).

The comparison of the medians and the number of IUs embedded in each text may demonstrates that the participants as intermediate learners of L2 French were faced with a difficult listening task, i.e. oral recalls of authentic aural language. As indicated in Table 6-1, the highest median is 7 (DA2-IP), which represents only 28 \% of the DA2 text. The data obtained in this dissertation confirm the results of the study conducted by Ableeva (2007) with the same population of learners. That is, intermediate level learners have limited experience with authentic aural texts, which results in their low ability to comprehend in much detail the content of such texts.

Examination of the SDs shows that there is more variation among the number of IUs recalled during the post-test sessions and the two final transfer sessions as compared with the pre-test IUs. This shift from homogeneous to more heterogeneous performance appeared throughout the study sessions may indicate that some learners benefited more from DA interventions and the enrichment program offered during the study. The variation of the ranges also demonstrates that generally the post-test, TA3-IP and TA4-IP range scores are more dispersed than those of the pre-test. The change in SDs and ranges

\textsuperscript{56} It should be noted here that the NDA1 and DA1-IP’s independent recalls were produced before any mediation (in the form of DA interventions or the enrichment program) was offered to the learners in this study.

\textsuperscript{57} As noted in Chapter 5, all pre-test sessions occurred before the enrichment session.
following enrichment shows that some learners were able to go farther in their listening development than others. Chapter 7 will provide more insights into the unique developmental path followed by each learner (see 7.6).

The descriptive statistics appear to point to an improvement in listening ability as measured by an increase in the number of IUs independently recalled from the NDA1 and DA1-IP sessions to the TA1-IP, NDA2, DA2-IP, TA2-IP and TA3-IP sessions. My argument, as will become clear in chapters 7 and 8 which examine the mediational interactions between the learners and the instructor, is that this improvement is primarily the result of mediation and the enrichment program that was tuned to the learners’ ZPDs. What is particularly interesting about the quantitative data is that it shows an up-and-down pattern in mean and SD scores. This, in my view, indicates that the development of listening comprehension was anything but linear. Subsequent sections address in detail the aforementioned assumptions and observations.

6.3.2 Unassisted recalls: the signs of microgenesis in L2 listening development

The results of independent recalls portrayed through descriptive statistics in Table 6-1 mirror the development of listening ability which represents a wave-like curve, in Lantolf and Aljaafreh’s (1995) terms. Essentially these data demonstrate that the development of listening ability is not smooth and is connected with a number of the difficulties that will be discussed in more detail below (see also Chapter 7 and Chapter 8). It is important to emphasize here that the results of independent recalls do not contradict the SCT understanding of development but rather extend empirical support for the
Vygotskyan claim concerning the evolutionary and revolutionary nature of development.

Vygotsky (1997a: 99) regarded child [learner] development as:

a complex dialectical process that is characterized by a complex periodicity, disproportion in the development of separate functions, metamorphoses or qualitative transformation of certain forms into others, a complex merging of the process of evolution and involution, a complex crossing of external and internal factors, a complex process of overcoming difficulties and adapting.

Furthermore, Vygotsky (1997a:100) argued that intellectual development is profoundly imbued with “the critical, spasmodic and revolutionary changes with which the history of child development is replete and which are found so often in the history of cultural development”. For this reason, Vygotsky (1978: 73) proposed to view “revolution and evolution as two mutually connected and closely interrelated forms of development. Leaps in the child’s development are seen [...] as no more than a moment in the general line of development”. It should be emphasized here that this view of development is not restricted to children but applies to adults as well, as attested in Lantolf and Aljaafreh (1995). Thus, considering the IU production data obtained in this study, it can be claimed that the unassisted listening recalls produced by the learners represent a classic illustration of Vygotskyan understanding of development which “certainly includes not just evolutionary but also revolutionary changes, regressions, gaps, zigzags, and conflicts...” (Vygotsky, 1997a: 221). This will become even clearer in Chapter 7 and Chapter 8.

With regard to regression in L2 microgenesis, Lantolf and Aljaafreh (1995:631) note that “regression is not only a normal property of the genesis of mental systems, it is also an ordinary feature of the operation of those systems” and rather reflects the
dialectical and dynamic processes at work in any development, including L2 development. From the perspective of SCT, the development of an individual inevitably passes through multiple regressions; however, it is not possible “for a normal (e.g. non-brain damaged or non-psychotic) individual to return to a previous developmental stage” (ibid., p. 621). In other words, the sociocultural view insists that even though an individual’s development (ontogenetic and microgenetic growth) includes movements from higher to lower as well as from lower to higher stages, it does not follow the same idiosyncratic developmental pathway (Van der Veer & Valsiner, 1991; Lantolf & Aljaafreh, 1995). This point concerning regressive (or recursive) movements in L2 listening development is discussed in the following sections (6.3.3 and 6.3.4).

6.3.3 Unassisted recalls: analysis of central tendencies

6.3.3.1 The pre-test sessions

The pre-test sessions (NDA1, DA1-IP and TA1-IP) were conducted during the first two weeks of the study. These sessions involved three texts similar in genre (a segment from an interview), format (video) and topic (comparison of French and American eating habits). Figure 6-1 graphically reproduces the pre-test mean raw scores for the total IUs recalled by the learners.
As indicated in 6.3.1, the NDA1 and DA1-IP independent recalls were produced before any mediation was offered to the learners, whereas the TA1-IP recall occurred after the first DA-based intervention (in DA1-MP). Thus, the greater, almost doubled, number of the IUs recalled during the TA1-IP session can be with a fair degree of confidence, attributed to one important factor: mediation provided during the assisted portion of DA-MP. The specific evidence to support this claim is presented in the qualitative analysis considered in Chapters 7 and 8).

Further credence is given to the effect of mediation on development in TA1-IP is the fact that, while NDA1 contained only 23 IUs (01:17 in real time), the text had a fair amount of redundancy. That is, many of the IUs contained in the text were repeated by the speaker and the learners were offered with the opportunity access to the same information twice.
The following excerpts from the NDA1 text where the speaker expressed her opinion on the simplicity of French food and the complexity of American food illustrate this point (see Appendix G for the transcript of the NDA1 text).

**Excerpt 6-1**

**D1.** 1. *et puis aussi je pense que*
   and I also think that

**M(1).** 2. *une grande différence c’est*
   a big difference it’s…

**M(1).** 3. *les Américains aiment les choses super-compliquées*
   Americans like super-complicated things

**S1.** 4. *enfin avec… pas au niveau compliquées*
   well … with… not complicated

**S2.** 5. *dans le sens des goûts et cetera*
   in the sense of taste et cetera

**D2.** 6. *mais par exemple une pizza*
   but for example a pizza

**D3.** 7. *Ici les gens aiment les pizzas*
   Here [in the US] people like pizza

**S(3).** 8. *le plus y a des choses dessus le mieux c’est*
   the more toppings there are, the better the pizza

**D4.** 9. *ou le plus il y a des choses dans un sandwich le mieux c’est*
   or the more things there are in a sandwich, the better it is

**D5.** 10. *donc ils adorent mettre trente milles choses dans un sandwich et*
   so they adore to put thirty thousand things in a sandwich

**M(2).** 11. *alors qu’en France c’est vraiment très simple* (rire)
   while in France it’s really simple (laughter)

**D6.** 12. *c’est ‘jambon-fromage’/*
   it's ham-cheese

**D7.** 13. *ou ‘tomate-mozzarella’ ou sur une pizza c’est/*
   or tomato-mozzarella or on a pizza it’s

At the end of the text, the speaker repeated the same ideas concerning the complexity of American food (line 23) and the simplicity of food in France using slightly different words (lines 24 and 25).
Excerpt 6-2

D14. 21. *moi enfin j’ai pas été élevée là-dedans*  
well I was not educated this way

S5. 22. *mais j’aime pas du tout ça parce que je trouve que c’est toujours*  
but I don’t like it at all because I think that [in the US] it’s always

S (3). 23. *le plus il y en a le mieux c’est*  
the more you have, the better it is

M(2). 24. *alors que je pense qu’en France c’est vraiment la mentalité au niveau de*  
whereas in France I think the cuisine mentality

M(2). 25. *euh… de la cuisine c’est la simplicité*  
uh… is about simplicity

S (6). 26. *donne les choses…*  
makes things

S. (6) 27. *enfin rend les choses meilleures en fait…*  
which finally makes things better…

D15. 28. *donc ça je pense que c’est une différence*  
thus, I think this is a big difference…

Normally, textual redundancy enhances listener comprehension (Buck, 2003; Rost, 2002). In fact, the analysis of NDA1 independent performance shows that all learners recalled mainly the IUs that were repeated twice, i.e. text redundancy prevented information loss, but the learners were unable to recall unrepeated IUs. Additionally, the speaker of the NDA1 text made many pauses and gesture. The following example illustrates unassisted recall of redundant IUs produced by Mona during her NDA1-IP session:

**Example 6-1:**

NDA1-IP (from Mona’s data)

OK… she says that the biggest difference between French and American food is that the **French food is more simple** because American food… like on their pizza or sandwich they put many different things but in France a sandwich will just have ham and cheese on it or tomato-
mozzarella… and… then… uhm… she talks about pizza like all the different things you could put on it but I am… I am not quite sure she is talking about French pizza or American pizza… and she says that… she likes the French food … how it’s simple because she thinks the simplicity of it makes everything tastes better because… yeah… like… the fact that it’s simple makes it better, the ingredients are better… something like that…

The DA1 and TA1 texts, while somewhat longer, did not contain repetitions and pauses (see the transcripts of DA1 and TA1 texts in Appendices H and I respectively). The DA1 text was the longest (32 IUs, text length 01:22 in real time) and the least redundant of all texts included in the study. These two factors may have contributed to the low mean score during the DA1-IP recall. The TA1 text was less redundant and contained less pauses than the NDA1 text; yet the learners, in the aggregate, produced the highest number of accurate IUs when recalling this text. Thus, this strongly suggested that the mediation negotiated during DA-MP indeed had a positive effect on text comprehension that occurred in TA1-IP.

6.3.3.2 The post-test sessions

The post-test sessions (NDA2, DA2-IP and TA2-IP) were carried out during weeks 7 and 8 of the study. It should be kept in mind that the post-test sessions were conducted right after the enrichment program (EP) during which an intensive DA-based instructional intervention, sensitive to the learners’ ZPD, was delivered. The texts which the learners listened to were similar in genre (interview) and format (video) but not in topic. The topic of the texts for NDA2 and DA2 was the same (comparison of French and
American restaurants), whereas the topic of TA2 text was slightly different, i.e. the speaker discussed the dining customs of his family (see the transcripts of the NDA2, DA2 and TA2 texts in Appendices J, K and L respectively).

Similarly to pre-test sessions, during NDA2 and DA2-IP and TA2-IP the learners recalled the texts independently without mediation. Figure 6-2 graphically displays the raw mean scores of IUs recalled during the post-test stage.

![Mean Scores for Post-test Sessions](image)

Figure 6-2: Mean (raw) scores for the total number of IUs produced independently during the NDA2, DA2-IP and TA2-IP sessions.

The comparison of post-test mean scores reveals an improvement in the production of IUs. In fact, the results from the post-test sessions support the findings obtained in the pre-test stage and confirm the overall tendency for a non-linear pathway of L2 listening microgenetic development. For example, the NDA2 mean score (5) seems to provide little evidence for the positive influence of the EP instructional intervention and in fact represents a “back-sliding” as compared to the TA1-IP mean score (6.14) obtained before the EP. However, the increase in the IU production was taken up again
during DA2-IP. In fact, the DA2-IP mean score (7.14) represents a substantial increase in the IUs recalled and is the highest mean score obtained throughout all eight assessment sessions. In addition to mediation provided during the enrichment program, greater redundancy of the DA2 text as opposed to the NDA2 text may have contributed to improved performance. The following example provides an illustration of the most successful independent recall (9 IUs produced) of the DA2 text (all acceptable ideas are underlined).

**Example 6-2:**

DA2-IP (from Erica’s data)

That one [the text] was easier… OK... what she was saying like the main differences between the restaurants in France and the restaurants here are the tipping system … and just like the mentality… the general mentality of restaurants… and she says like you know … in France like… the level of service isn’t really that important… I mean she is not saying that it’s bad but she is saying that you know they don’t really put a lot of emphasis on it because they go… you know they go to a café … she says when her friends in France they go to a café you know they sit you know for… between two or three hours for a long time … just like talking… and uhm… uhm… that’s what they do in France but here she says… you know… when you are finished eating they kind of want you to leave because like … the…you know the waiters and waitresses here … they are kind of like depending on the tips … for the money… so the more people they get in an hour, the more they get … so they kind of like want you to leave because they know more people are waiting to eat … so they kind of try to rush you out … it’s kind of like the mentality they have here…

The mean score of TA2 (7) represents a slight drop in performance, which can be explained by the change of topic and the lower degree of redundancy as compared to the DA2 text. This latter fact, however, speaks in favor of the effect of DA interventions and
the enrichment program. That is, the learners were able to sustain their independent performance and obtained almost the same score as in DA2-IP (7.14) despite the decreased degree of text redundancy.

It should be pointed out that generally the means obtained during the post-test sessions are higher than those of the pre-test. Thus, although text redundancy and topic familiarity (e.g. in DA2) might have facilitated learners’ text processing, the main factor of enhanced IU production may be predominantly attributed to the effects of mediation provided throughout the enrichment program and mediated portions of the assessment sessions.

6.3.3.3 The final transfer sessions

The two final transfer sessions (TA3-IP and TA4-IP) were conducted at the end of the study (weeks 8 and 9). As described earlier (see Chapter 5), these transfer tasks were designed to determine how far the learners could extend their L2 listening ability enhanced by DA-based interventions. For this reason, TA3 and TA4 sessions were based on more complex texts (see the transcripts of TA3 and TA4 texts in Appendices M and N respectively). That is, TA3 was designed as a far transfer and involved a text similar in format (video) but differing in genre (video) and in topic as compared to the pre-test and post-test texts. The text was a TV-news report discussing recent smoking regulations in French restaurants. The TA4 session was designed as a very far transfer and was a radio commercial, advertising a Belgian restaurant chain in France. It should be pointed out that the TA4 text was similar in topic (food) but varied in genre (advertisement) and
format (audio) and in this sense differed from all texts used in the study. Figure 6-3 graphically displays the mean scores of IUs produced during the final transfer stage, TA3-IP and TA4-IP.

![Mean Scores for Final Transfer Sessions](image)

Figure 6-3: Mean (raw) scores for the total number of IUs produced independently during the TA3-IP and TA4-IP sessions.

The listening performance of the learners during the two final transfer assessments reveals a new regression in their independent listening performance resulting in the decline of the IUs recalled, specifically during TA4-IP. It is assumed that one of the main reasons for this decline resides in the change of genre (TA3 and TA4) and format (TA4). The mean score of TA3-IP (5.57) indicates that despite the change in genre, the learners were able to sustain their ability to perform the task and to produce a certain amount of acceptable IUs. The regression in listening performance can be explained by the shift in genre. As often occurs in TV reports, part of the text was a script that was read but part was free speech. The oral reading of the script was characterized by the absence of pauses and with very little if any redundancy. The free speech part was
based on two short interviews embedded in the report; these interviews contained many pauses and redundant elements. In fact, the analysis of TA3-IP recalls’ transcripts shows that learners tended to recall mainly the redundant parts of the TV text with a couple of successful attempts at recalling non-redundant elements. The report contains the following five parts: reporter – interviewee – reporter – interviewee – reporter. An illustration of the most successful TA3-IP recall (11 acceptable IUs) follows.

Example 6-3:

TA3-IP (from Chris’s data)

It starts off and …before the commentator starts speaking… the waitress asks the group of patrons ‘smoking or non smoking?’ and they said non smoking ‘follow me… follow me’ … the hostess … and then it starts talking … the narrator starts talking of … the issue of… the issue of smoking and… mentions this particular restaurant that they were filming at… the majority of people are non-smokers and then it starts talking about the… people who do smoke and… it’s important to them… they interviewed a gentleman who is a smoker and he says how he likes to listen to jazz music, you know… eat, go out but to not be able to smoke … it’s impossible… it’s uhm… impossible for him, and then they start talking about… Oh!!! Before they started talking about the gentleman, the… the narrator says that the… the topic of smoking or non-smoking is getting… is going to be… a thing of… will be an issue that will not disappear in the next year, so he said it’s an issue being talked about… it will not disappear… so he’s saying… so he’s saying, the next year will not… he said disparaître … so he’s saying it will not disappear… and after the gentleman who said he likes to smoke and if he wouldn’t… weren’t able to smoke it, to listen to music and the jazz, he’d be… that’s not possible for him… and then it started talking about… there is… there is a lot… I guess a lot… I think he said it was passed in nineteen … I screwed … I screwed that part of … but… and they interviewed a person who was in the … the hospitality at … he said hotel so yeah I think that meant ‘hospitality’… it was written in this caption … I think he was talking about how… he is hesitant… he is not a smoker himself but he is hesitant to make something automatically… it makes things automatically illegal
he is talking about smoking… often times people can work it out… and he is against having a law to make smoking in public places illegal automatically and then … the narrator came back in and said that for…
the questions of health it’s necessary that government intervenes.

The TA4-IP (0.57) mean score reveals that the learners had difficulties sustaining their unassisted performance as many variations were introduced into the task. In fact, only two learners were able to produce two acceptable IUs independently. Despite the fact that this was the shortest text used in the study (20 seconds in real time, containing 6 IUs), the learners obviously experienced difficulties while listening to it. Their poor listening performance which occurred during TA4-IP may be explained by the particularities of the audio advertisement genre. The text was characterized by conventions typical of advertisements, including music, sound effects, speaker intonation patterns, the absence of pauses and relatively low redundancy, other than repetition of the names of the restaurant.

The difficulties experienced by the learners when listening to the TA4 text may be primarily attributed to changes in genre and format. The following three recalls taken from Erica’s, Dan’s and Fée’s data exemplify the problems the learner had trying to cope with the ‘very far transfer’ text. Erica was able to recall only two of the six IUs contained in the text, while Dan and Fée were both unable to recall any IUs.

**Example 6-4:**

TA4-IP recall (from Erica’s data)

Uhm… it’s about this… this brasserie *Léon de Burxelles*… uhm… I think it’s the name of it … and … it kept saying something like *the menu* and the prices… uhm… and… *le déjeuner*…
Example 6-5:

TA4-IP recall (from Dan’s data)

D.: OK… Léon de Bruxelles … it sounds like … it’s… I heard them saying… uhm … it’s beautiful … c’est belle… and… it mentions frites … frites means French fries… [long pause]

--------------------

R.: so in general it’s about what? … can you recall it?
D.: is it a restaurant?
R.: uhm... and... how do you understand the text?
D.: ... oh... I am not... I am not sure…
R.: ... you are not sure? ... can you recall it?
D.: not really… let’s listen again.

Example 6-6:

TA4-IP recall (from Féé’s data)

First she says like… like ‘good afternoon’ or ‘good day’ or something like that … uhm… I… I guess the restaurant is like ‘Brukselle’ or something like that … uhm… she says… ‘fries on the menu’ and then a man… I guess he says ‘fries’ but it sounds like ‘vrite’ … I don’t know what it is though … it might be just ‘frites’ … and then… uhm… she said something at the end… uhm.. I don’t really remember what it was…

Thus, a decline in unaided listening performance which occurred during TA3-IP and TA4-IP also point to the uneven nature of L2 listening development. Additionally, a dramatic drop of IU production in TA4-IP can be explained by learners’ low ability or their inability in some cases to engage in very far transfer because the TA4 text was almost outside of their ZPD (see also 6.4.4 for the paired t-test results). That is, this inability may reside in the difficulty of the TA4 text which was brief, had low redundancy, it presented considerable phonological problems and it was a culturally
dense text since it contained cultural references unknown to the learners, e.g. *Léon de Bruxelles* (restaurant’s name), mussels and fries (Belgian cuisine specialties).

### 6.3.4 Unassisted recalls: analysis of variability in the aggregate IU production

The descriptive statistical information presented in Table 6.1 also offers several insights into the differences of learners’ independent ability to cope with authentic aural language. The variability results suggest that the learners did not represent a homogeneous group and performed quite differently, specifically after the enrichment program during which they all received identical instructional assistance. From the perspective of SCT, the SDs and range numbers exhibit differences in the learners’ ZPD. These numbers lend empirical support to Vygotsky’s argument that while solving problems individuals may vary in their responsiveness to assistance and some may benefit more from this assistance than others, depending on the scope of their ZPDs (Vygotsky, 1986). Additionally, the variability across learners provides support for Vygotsky’s claim regarding an individual’s susceptibility to advance only “in terms of the level of intellectual difficulties he is able to face” (Vygotsky, 1987:209). This issue of limits determined by the state of the learners’ development will be revisited in Chapters 7 and 8, devoted to the analysis of learners’ mediated listening recalls through the lens of the ZPD. The present section will focus on quantitative justifications regarding the differences in learners’ independent listening performance that occurred in the course of the assessment sessions.
As discussed above (see 6.3.1), the standard deviation and range scores demonstrate that there is less variation between the learners’ pre-test scores as compared to their post-test scores. Figures 6-4, 6-5, 6-6 show the frequency of idea units recalled during the pre-test sessions and their distributions: the X axis displays listening performance in terms of the number of idea units produced and the Y axis displays the number of participants who achieved a given score. For example, Figure 6-4 demonstrates that 2 participants were able to recall 3 IUs whereas 5 participants recalled 4 acceptable IUs.

Mean = 3.71; SD = 0.48; N=7

Figure 6-4: The frequency of the IUs recalled during the NDA1.
The low pre-test SD scores indicate that learners performed more homogeneously during the first stage of the study. However, a slight increase in SDs is already observed in TA1-IP. This increase may be attributed to the learners’ reaction to mediation offered.

**Mean** = 2.85; **SD** = 1.67; **N** = 7

Figure 6-5: The frequency of the IUs recalled during the DA1-IP.

**Mean** = 6.14; **SD** = 1.86; **N** = 7

Figure 6-6: The frequency of the IUs recalled during the TA1-IP.

The low pre-test SD scores indicate that learners performed more homogeneously during the first stage of the study. However, a slight increase in SDs is already observed in TA1-IP. This increase may be attributed to the learners’ reaction to mediation offered.
during DA1-MP. Conversely, the larger post-test SDs and ranges (except for DA2-IP) demonstrate the rise of variation in learners’ SD scores and a decrease in their homogeneity. Figures 6-7, 6-8, 6-9 illustrate the frequency of the scores per each post-test session and their distributions.

**Figure 6-7**: The frequency of the Idea Units recalled during the NDA2.

Mean = 5; SD = 2.88; N= 7
Although the post-test means point to some improvement in listening performance, which is most likely due to the overall effect of the enrichment program and DA interventions, the larger post-test SD dispersion indicates that during the second
stage of the study the learners were clearly not at the same level of ability with regard to comprehending authentic spoken texts. This tendency deepened throughout the two final transfer sessions.

Figures 6-10 and 6-11 demonstrate the frequency of TA3-IP and TA4-IP scores and their distributions.

![Figure 6-10: The frequency of the Idea Units recalled during the TA3-IP.](image)

Mean = 5.57; SD = 3.99; N= 7
As Figure 6-10 demonstrates, the SDs and range scores of TA3-IP are larger than those of the previous sessions. This SD score certainly indicates very little homogeneity and high variation among the learners which can be due to the change of genre and topic of the TA3 text. This high variation also points to the differences in learners’ individual listening development, meaning that some of them benefited more from the mediation offered throughout the study than others. As for the final session, the TA4-IP SD appears to be larger than the TA4-IP mean. This certainly indicates that this transfer task was far beyond the learners’ listening developmental micro-gains achieved in the previous sessions.

6.3.5 Additional findings

The study provided further insights into the difficulties experienced by the intermediate L2 learners when listening to authentic aural language without assistance.
Since this study involved various authentic texts, it brought to light another interesting finding concerning the relationship between text redundancy and listening difficulties. Buck (2003) and Rost (2002) note that comprehension difficulties of L2 learners largely depend on a variety of speaker and text characteristics. Speaker characteristics include speech rate, clarity of pronunciation, prosodic features (stress, intonation) etc. whereas text characteristics comprise linguistic elements (e.g. phonology, familiar or unfamiliar vocabulary, grammar points), the amount of redundancy, explicitness, topic familiarity etc.

With regard to comprehension difficulties, the analysis of unassisted oral recalls obtained from the learners revealed that a greater degree of text redundancy led to better listening performance, which, in turn, generally correlated with increased production of IUs. Thus, this finding is in line with the results from the previous L2 listening research that regards text redundancy as a vital factor in helping language learners understand L2 spoken discourse (e.g. Ur, 1984; Chiang & Dunkel, 1992; Buck, 1992a; Brindly, 1998; Flowerdew & Miller, 2005). However, the results of the present dissertation contradict the findings of those L2 studies that claim that language learners’ comprehension usually declines when confronted with a fast speech rate (e.g. Stanley, 1978; Griffiths 1992). Table 6-2 highlights the mean scores of IUs recalled and their interdependence with redundancy and speech rate characteristics.
As noted by Buck (2003), there is little research on the relationship between speech rate and L2 listening comprehension. The findings in this study suggest that the learners performed better when they listened to more redundant texts, containing pauses, and the production of IUs was not affected by the speakers’ speech rate even though it was fast (e.g. the DA2 text). Although further research is needed to confirm this finding, it can be assumed that speech rate does not seriously impact text comprehension of the L2 university learners at the intermediate level if it is coupled with sufficient amount of text redundancy and pauses.

In sum, the aggregate data studied by means of descriptive statistical measures allowed for demonstrating that individual learners followed quite divergent

<table>
<thead>
<tr>
<th>Session</th>
<th>NDA1</th>
<th>DA1</th>
<th>TA1</th>
<th>NDA2</th>
<th>DA2</th>
<th>TA2</th>
<th>TA3</th>
<th>TA4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean for IUs recalled</td>
<td>3.71</td>
<td>2.85</td>
<td>6.14</td>
<td>5</td>
<td>7.14</td>
<td>7</td>
<td>5.57</td>
<td>0.57</td>
</tr>
<tr>
<td>Text Redundancy</td>
<td>R</td>
<td>NR</td>
<td>LR</td>
<td>LR</td>
<td>R</td>
<td>LR</td>
<td>LR</td>
<td>LR</td>
</tr>
<tr>
<td>Speech rate: WPM</td>
<td>170</td>
<td>190</td>
<td>195</td>
<td>170</td>
<td>180</td>
<td>195</td>
<td>180</td>
<td>120</td>
</tr>
</tbody>
</table>

*Note 1:* R = redundant; LR = low level of redundancy; NR = non-redundant; *Note 2:* WPM = words per minute.

As noted by Buck (2003), there is little research on the relationship between speech rate and L2 listening comprehension. The findings in this study suggest that the learners performed better when they listened to more redundant texts, containing pauses, and the production of IUs was not affected by the speakers’ speech rate even though it was fast (e.g. the DA2 text). Although further research is needed to confirm this finding, it can be assumed that speech rate does not seriously impact text comprehension of the L2 university learners at the intermediate level if it is coupled with sufficient amount of text redundancy and pauses.

In sum, the aggregate data studied by means of descriptive statistical measures allowed for demonstrating that individual learners followed quite divergent

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58 All speech rates are counted in terms of words per minute and represent average speech rate produced by the speaker or speakers (e.g. in TA3) of the text. As noted by Buck (2003), the temporal variable literature proposes to measure speech rates in syllables per second and in words per minute. Although speech rate measured by syllables per second is recommended as a more precise measure (e.g. Tauroza & Allison, 1990), studies dealing with speech rate often opt for word per minute measurement, which represents a less complex and less time consuming unit of rate measurement (e.g. Zhao, 1997).
developmental trajectories, which is consistent with the pilot study findings (Ableeva, 2007; 2008). Given that the primary focus of this research is to track the microgenesis L2 listening development, the next section analyzes independent recall data in aggregation with respect to learners’ developmental micro-changes observed during transfer sessions.

6.4. Tracking micro-gains of L2 Listening development: inferential statistics

Paired t-tests were used to determine the extent to which the learners improved their listening ability following DA-interventions and the enrichment program. The paired t-test analysis was chosen for this task because it allows the comparison of pre-test and post-test scores of each individual and exploration of whether the means of pre-test and post-test results are significantly different from one another or not\(^{59}\).

With respect to the present paired t-test analysis, the pre-test was termed pre-mediated condition (PMC) and included NDA1/DA1-IP results since these two sessions were conducted before the DA-interventions and the enrichment program. That is, NDA1/DA1-IP (or pre-mediated) results represent the baseline of independent performance before any mediation was offered to the learners. The post-test involved the results obtained during all four TA sessions and included the following conditions: very near transfer (TA1-IP) conducted following the first DA intervention (in DA1-MP); near transfer (TA2-IP) carried out following the enrichment program and two DA-interventions (in DA1-MP and DA2-MP); far transfer (TA3-IP) conducted following the enrichment program and three DA-interventions (in DA1-MP, DA2-MP and TA2-MP);

\(^{59}\) The use of paired t-test in this case was suggested by a research assistant in the Statistical Consulting Center at The Pennsylvania State University.
very far transfer (TA4-IP) conducted following the enrichment program and four DA-interventions (in DA1-MP, DA2-MP, TA2-MP and TA3-MP). Thus, paired t-tests were run to explore the significance of the mean differences for the following four combinations:

1. Mean difference between PMC (NDA1, DA1-IP) and very near transfer (TA1-IP).
2. Mean difference between PMC (NDA1, DA1-IP) and near transfer (TA2-IP).
3. Mean difference between PMC (NDA1, DA1-IP) and far transfer (TA3-IP).
4. Mean difference between PMC (NDA1, DA1-IP) and very far transfer (TA4-IP).

It is important to note that since 4 tests were performed, it was necessary to invoke a Bonferroni correction and to use a significance level of 0.05/4 = 0.0125. This means that for the following tests, the null hypothesis is rejected (indicating that there is no significant difference between the means) if the p-value is less than 0.0125.

It should be also noted that the following four tests are only valid if the mean differences follow a normal distribution. This assumption could be checked more thoroughly if there had been more participants in the study. However, for TA1-IP and TA2-IP, this assumption seems reasonable based upon the histogram presented in Figures 6-12 and 6-13 below. For TA3-IP and TA4-IP, there is less certainty. For these last two transfer conditions, this assumption does not matter in any case because the p-values show that the differences are not significant.
6.4.1 Pre-mediated and very near transfer combination

The mean difference between pre-mediated condition (NDA1/DA1-IP) and very near transfer condition (TA1-IP) is presented in Table 6.3.

Table 6-3: Paired t-test for TA1-IP – NDA1/DA1-IP.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Stand. Dev</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA1</td>
<td>7</td>
<td>0.2275</td>
<td>0.0691</td>
<td>0.0261</td>
</tr>
<tr>
<td>NDA1/DA1</td>
<td>7</td>
<td>0.1195</td>
<td>0.0346</td>
<td>0.0131</td>
</tr>
<tr>
<td>Difference</td>
<td>7</td>
<td>0.1080</td>
<td>0.0689</td>
<td>0.0260</td>
</tr>
</tbody>
</table>

Note. SE Mean = standard deviation of the mean
95% lower bound for mean difference: 0.0574
T-Value = 4.15 P-Value = 0.003

Figure 6-12: Histogram for the mean difference between TA1-IP and NDA1/DA1-IP.

60 The "Mean" of 0.2275 represents the average proportion of idea units produced by the learners in TA1. The ‘Mean’ of 0.1195 represents the average proportion of idea units produced by the learners in the NDA1/DA1-ip pre-test sessions (before any mediation). The ‘Mean’ of 0.1080 represents the average difference in proportion between the TA1 and NDA1/DA1-ip.
Since the p-value = 0.003, which is less than 0.0125, it can be concluded that the average difference between the proportion correct on TA1-IP and NDA1/DA1-IP is significantly greater than zero. It should be kept in mind that mediation was offered to the learners between NDA1/DA1-IP and TA1-IP. That is, the result of the paired t-test for NDA1/DA1-IP and TA1-IP confirms that, on average, an improvement on independent listening performance in TA1-IP, a very near transfer, may occur as a result of the administration of DA-based intervention during DA1-MP, which was the second portion of DA1 session.

6.4.2 Pre-mediated and near transfer combination

Table 6-4 portrays the mean difference between pre-mediated condition (NDA1/DA-IP) and near transfer condition (TA2-IP).

Table 6-4: Paired t-test for TA2-IP – NDA1/DA1-IP.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Stand. Dev</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA2</td>
<td>7</td>
<td>0.3182</td>
<td>0.1338</td>
<td>0.0506</td>
</tr>
<tr>
<td>NDA1/DA1</td>
<td>7</td>
<td>0.1195</td>
<td>0.0346</td>
<td>0.0131</td>
</tr>
<tr>
<td>Difference</td>
<td>7</td>
<td>0.1987</td>
<td>0.1342</td>
<td>0.0507</td>
</tr>
</tbody>
</table>

Note. SE Mean = standard deviation of the mean
95% lower bound for mean difference: 0.1002
T-Value = 3.92 P-Value = 0.004
Since the p-value is 0.004, which is less than 0.0125, it can be concluded that the average difference between the proportion correct on TA2-IP and NDA1/DA1-IP is greater than zero. That is, this result confirms that, on average, an improvement in independent listening performance may be attributed to the administration of the enrichment program and two DA-based interventions during DA1-MP and DA2-MP, both occurred in the second portion of DA sessions.

6.4.3 Pre-mediated and far transfer combination

Table 6-5 displays the mean difference between pre-mediated condition (NDA1/DA1-IP) and far transfer condition (TA3-IP).
Since the p-value is 0.086, which is greater than 0.0125, it indicates that the mean difference between the proportion correct for TA3-IP and NDA1/DA1-IP is greater than 0. Therefore, it cannot be concluded that an average improvement of independent listening performance occurred after the administration of the enrichment program and three DA interventions offered during DA1-MP, DA2-MP and TA2-MP.

Table 6-5: Paired t-test for TA3 – NDA1/DA.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Stand. Dev</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA3</td>
<td>7</td>
<td>0.2229</td>
<td>0.1598</td>
<td>0.0604</td>
</tr>
<tr>
<td>NDA1/DA1</td>
<td>7</td>
<td>0.1195</td>
<td>0.0346</td>
<td>0.0131</td>
</tr>
<tr>
<td>Difference</td>
<td>7</td>
<td>0.1034</td>
<td>0.1765</td>
<td>0.0667</td>
</tr>
</tbody>
</table>

Note. SE Mean = standard deviation of the mean
95% lower bound for mean difference: -0.0263
T-Value = 1.55 P-Value = 0.086

Figure 6-14: Histogram for the mean difference between TA3-IP and NDA1/DA1-IP.
It should be also remembered that TA3 was designed as a far transfer assessment and was based on a text similar in format (video) but different in genre (TV report) and in topic. The mean difference obtained for the TA3-IP and NDA1/DA1-IP combination suggests that on average the learners could not cope which the far transfer task, which involved two new variations (genre and topic) as compared to the very near transfer (TA1) and near transfer (TA2) tasks, grounded in the same format, genre and topic (TA2’s topic involved a slightly different topic). It should be pointed out, however, that the learners performed quite differently during TA3-IP. This phenomenon manifested itself in the large SD and range of TA3-IP. In fact, the TA3-IP raw scores (0, 3, 3, 5, 7, 10, 11 of IUs recalled) demonstrate that some learners were able to sustain the task better than others with one learner producing zero correct IUs. Thus, the average mean difference for the TA3-IP and NDA1/DA1-IP combination might have been affected by the outlying result of one learner.

6.4.4 Pre-mediated and very far transfer combination

The mean difference between pre-mediated condition (NDA1/DA1-IP) and very far transfer condition (TA4-IP) is presented in Table 6-6.
Since the p-value is 0.648, which is greater than 0.0125, it demonstrates that the mean difference between the proportion correct for TA4-IP and NDA1/DA1-IP is greater than 0. That is, on average, it cannot be concluded that an improvement of independent listening performance occurred during the administration of very far transfer assessment based on text different in genre, in format and slightly in topic.

Table 6-6: Paired t-test for TA4-IP – NDA1/DA1-IP.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Stand. Dev</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA4</td>
<td>7</td>
<td>0.0952</td>
<td>0.1627</td>
<td>0.0615</td>
</tr>
<tr>
<td>NDA1/DA1</td>
<td>7</td>
<td>0.1195</td>
<td>0.0346</td>
<td>0.0131</td>
</tr>
<tr>
<td>Difference</td>
<td>7</td>
<td>-0.0242</td>
<td>0.1610</td>
<td>0.0609</td>
</tr>
</tbody>
</table>

Note. SE Mean = standard deviation of the mean
95% lower bound for mean difference: -0.1425
T-Value = -0.40 P-Value = 0.648

Figure 6-15: Histogram for the mean difference between TA4-IP and NDA1/DA1-IP.

Since the p-value is 0.648, which is greater than 0.0125, it demonstrates that the mean difference between the proportion correct for TA4-IP and NDA1/DA1-IP is greater than 0. That is, on average, it cannot be concluded that an improvement of independent listening performance occurred during the administration of very far transfer assessment based on text different in genre, in format and slightly in topic.
Apparently, the results of paired t-test for TA4-IP and NDA1/DA1-IP combination confirms the assumption made in 6.3.3.3., i.e. this transfer task was literally ‘very far’ and extended beyond the learners’ current listening potential (i.e., their ZPD). Thus, the results obtained during TA4-IP are in line with the observation made by Brown (1990:128): “one cannot study learning and transfer in a vacuum, [and] transfer propensity will be strongly influenced by that which is to be learned.” Since the learners in this study listened mostly to segments of video interviews (from the NDA1 to TA2 sessions), they developed a certain ability to understand better this type of texts. This observation is confirmed by the results of the paired t-tests performed for the TA1-IP – NDA1/DA1-IP and the TA2-IP – NDA1/DA1-IP combinations and partially by the results for the TA3-IP – NDA1/DA1-IP combination (except for one learner who did not produce any acceptable IUs). Because the TA4-IP involved a new type of genre and format, the level of learners’ listening microgenetic development did not allow them to understand this text independently and led to an average poor IU production.

6.5 Analysis of disaggregated data

6.5.1 Production of IUs: unassisted recalls in disaggregation

The raw scores for acceptable IUs produced by each participant throughout all study sessions appear in Table 6-7.
Based on the raw count of IUs accurately recalled, the learners can be, at least
tentatively, segmented into three groups: 1) Michel (25), and Lora (26); 2) Mona (39),
Erica (40), and Dan (40); 3) Chris (48) and Fé (48). Microgenetic analysis of unassisted
performance and especially mediated performance (see Chapters 7 and 8) reveals
individual differences in the listening development of learners who produced a similar
number of acceptable IUs. The subsequent sections illustrate each learner’s idiosyncratic
developmental path with respect to his or her unassisted listening performance and
present the results of unassisted recalls with respect to the main IUs, supporting IUs, and
details. The learners are considered in the following order: Chris, Fé, Dan, Erica, Mona,
Lora and Michel.

<table>
<thead>
<tr>
<th>Sessions</th>
<th># of IUs</th>
<th>Chris</th>
<th>Féé</th>
<th>Erica</th>
<th>Dan</th>
<th>Mona</th>
<th>Lora</th>
<th>Michel</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDA1</td>
<td>23</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>DA1</td>
<td>32</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>TA1</td>
<td>27</td>
<td>5</td>
<td>10</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>NDA2</td>
<td>21</td>
<td>9</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>DA2</td>
<td>25</td>
<td>7</td>
<td>7</td>
<td>9</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>TA2</td>
<td>22</td>
<td>10</td>
<td>12</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>TA3</td>
<td>25</td>
<td>11</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>3</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>TA4</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>IUs total</td>
<td>181</td>
<td>48</td>
<td>48</td>
<td>40</td>
<td>40</td>
<td>39</td>
<td>26</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 6-7: Raw scores summary table for total number of idea units produced by each
learner.
6.5.2 Chris

Chris was one of the two most proficient students in the experimental cohort. Factors that may have contributed to this rating are the length of L2 study (2 years in middle school and 4 years in high school). He had a very positive attitude toward French language and culture and a high motivation for participation in this study. Table 6-8 displays the number of main IUs, supporting IUs and details produced by Chris in the course of all eight assessment sessions of the study.

Table 6-8: Chris: the raw scores for the production of IUs.

<table>
<thead>
<tr>
<th>Texts</th>
<th>Number and percentage of idea units expected and observed</th>
<th>Main Idea Units</th>
<th>Supporting IUs</th>
<th>Details</th>
<th>Total IU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Exp.</td>
<td>Obs.</td>
<td>%</td>
<td>Exp.</td>
</tr>
<tr>
<td>NDA1</td>
<td></td>
<td>2</td>
<td>1</td>
<td>50</td>
<td>6</td>
</tr>
<tr>
<td>DA1</td>
<td></td>
<td>8</td>
<td>2</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>TA1</td>
<td></td>
<td>5</td>
<td>1</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrichment</td>
<td>Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDA2</td>
<td></td>
<td>5</td>
<td>5</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>DA2</td>
<td></td>
<td>4</td>
<td>2</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>TA2</td>
<td></td>
<td>6</td>
<td>3</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>TA3</td>
<td></td>
<td>6</td>
<td>3</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>TA4</td>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. Exp. = expected (the IUs embedded in the text and expected in learner production); Obs. = observed (the actual number of IUs produced by the learner)

As can be seen in Table 6-8, Chris’ listening performance was continuously improving from session to session. In fact, Chris was one of two students in the study who produced the highest number of IUs (48 out of 181). Chris’s post-test results occurred after the enrichment program are higher (except for TA4) than those of the pre-test. During the pre-test stage, Chris’ results were very similar to the results of many
other participants (total number of IUs produced is 11). However, Chris’ post-test and TA3 results show a substantial improvement in his listening development.

A relatively even increase in IU production evidences Chris’ developing ability to understand authentic spoken French. Notably, during TA3, for the first time, Chris produced eleven IUs, the highest number of IUs of all learners on this task, and he was the only learner who produced this number of IUs while recalling TA3 text, which aimed at measuring learners’ ability to sustain a far transfer task. During TA4-IP session, designed as a ‘very far’ transfer, Chris was not able, however, to recall any acceptable IUs and his IU production witnessed a dramatic decline for this difficult text. In sum, Chris’ microgenetic listening development may be attributed to his positive response not only to the enrichment program but also to the mediation offered during the assessment sessions.

Figure 6-16 graphically represents Chris’s total number of IUs produced throughout the assessment sessions. The graph includes the number of IUs embedded in the texts (all blue bars) and the number of IUs recalled by Chris independently during NDA sessions and the unassisted portions of DA and TA sessions.
6.5.3 Fé

Fé had studied French for one year in middle school, four years in high school and had taken three French courses in college. Like Chris, she was one of the most proficient students in the study. Factors potentially contributing to her good intermediate proficiency level might reside in the length of L2 study, her participation in an exchange program while in high school, which included her two-week sojourn in France and her continuous contacts with French friends from this exchange program. Table 6-9 represents the number of main IUs, supporting IUs and details produced by Fé throughout all assessment sessions of the study.

Figure 6-16: The number of IUs produced by Chris independently per each session.

Note. IUs = idea units; EP = enrichment program
Table 6-9: Féé: the raw scores for the production of IUs.

<table>
<thead>
<tr>
<th>Texts</th>
<th>Number and percentage of idea units expected and observed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main Idea Units</td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
</tr>
<tr>
<td>NDA1</td>
<td>2</td>
</tr>
<tr>
<td>DA1</td>
<td>8</td>
</tr>
<tr>
<td>TA1</td>
<td>5</td>
</tr>
<tr>
<td>NDA2</td>
<td>5</td>
</tr>
<tr>
<td>DA2</td>
<td>4</td>
</tr>
<tr>
<td>TA2</td>
<td>6</td>
</tr>
<tr>
<td>TA3</td>
<td>6</td>
</tr>
<tr>
<td>TA4</td>
<td>2</td>
</tr>
</tbody>
</table>

Note. Exp. = expected (the IUs embedded in the text and expected in learner production); Obs. = observed (the actual number of IUs produced by the learner)

As shown in Table 6-9, Féé produced 48 acceptable IUs (48 out of 181), a count comparable to Chris’s. However, Féé’s developmental path was rather uneven as compared to Chris’s microgenetic pathway. She tended to improve her performance until the TA2 session. During TA2, Féé was the only learner who produced twelve acceptable IUs while recalling the text, intended to assess learners’ ability to sustain a near transfer task. Notably, this was the highest score of the whole study. Her performance in TA3 shows a marked decline, and as with the other learners, TA4 presented her with great difficulty.

Although Féé’s listening micro-gains followed a zigzagged trajectory, she exhibited substantial development in her IU production, which may be primarily explained by her mediated exposure to listening. An additional factor that might influence her listening improvement was her L2 French proficiency level and high motivation with regard to participation in this study.
Figure 6-17 graphically represents Fée’s total number of IUs produced throughout the assessment sessions. The graph displays the number of IUs embedded in the texts (all blue bars) and the number of IUs recalled by Fée independently during NDA sessions and the unassisted portions of DA and TA sessions.

![Chart of Idea Units]

Note. IUs = idea units; EP = enrichment program

Figure 6-17: The number of IUs produced by Fée independently per each session.

6.5.4 Dan

Dan was overall an experienced L2 learner. He had learned French for five years in middle and high school and at the time of the study he was enrolled in the intermediate course, his first French course at the university level. Similar to Chris, Dan had a very
positive attitude towards his participation in this study. In contrast to Chris, however, Dan did not have a high frequency of exposure to authentic spoken French (see 5.2.4). Table 6-10 presents the number of main IUs, supporting IUs and details produced by Dan in the course of all eight assessment sessions of the study.

Table 6-10: Dan: the raw scores for the production of IUs.

<table>
<thead>
<tr>
<th>Texts</th>
<th>Number and percentage of idea units expected and observed</th>
<th>Main Idea Units</th>
<th>Supporting IUs</th>
<th>Details</th>
<th>Total IU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exp. Obs. % Exp. Obs. % Exp. Obs. % Exp. Obs. % Exp. Obs. % Exp. Obs. %</td>
<td>Exp. Obs. % Exp. Obs. % Exp. Obs. % Exp. Obs. % Exp. Obs. % Exp. Obs. %</td>
<td>Exp. Obs. % Exp. Obs. % Exp. Obs. % Exp. Obs. % Exp. Obs. % Exp. Obs. %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDA1</td>
<td>2 2 100 6 0 0 15 2 13.3 23 4 17.39</td>
<td>NDA2 5 4 80 5 1 20 11 0 0 21 5 23.80</td>
<td>NDA3 6 4 66.6 5 1 20 14 6 42.85 25 10 40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DA1</td>
<td>8 1 12.5 8 1 12.5 16 0 0 32 2 6.25</td>
<td>DA2 4 1 25 4 0 0 17 6 35.29 25 7 28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA1</td>
<td>5 2 40 10 3 30 12 0 0 27 5 18.51</td>
<td>TA2 6 4 66.6 4 0 0 12 4 33.3 22 7 28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrichment</td>
<td></td>
<td>TA3 6 3 50 5 1 20 14 6 42.85 25 10 40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td></td>
<td>TA4 2 0 0 3 0 0 1 0 0 6 0 0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Exp. = expected (the IUs embedded in the text and expected in learner production); Obs. = observed (the actual number of IUs produced by the learner)*

As can be seen in Table 6-10, Dan was able to produce 40 out of 181 IUs. Dan’s scores suggest that his production of IUs was continuously increasing, indicating improvement of his listening performance from session to session. The microgenetic analysis of Dan’s IU productions also demonstrates that his post-test scores are higher (except for TA4) than those of his pre-test. Similar to Chris, Dan’s post-test and TA3 results show an improvement in his listening development. Although Dan produced fewer IUs than his more proficient peer Chris, his independent recalls also witness a balanced increase of IU production until he encounter the TA4 text.
Figure 6-18 graphically represents Dan’s total number of IUs produced throughout the assessment sessions. The graph includes the number of IUs embedded in the texts (all blue bars) and the number of IUs recalled by Dan independently during NDA sessions and the unassisted portions of DA and TA sessions.

![Chart of Idea Units](chart.png)

*Note.* IUs = idea units; EP = enrichment program

Figure 6-18: The number of IUs produced by Dan independently per each session.

6.5.5 Erica

Erica was a student with intermediate proficiency in French. She studied French for three years in High School, 3 semesters in college prior to the study and chose French as her minor. Like Dan, Erica had limited exposure to authentic spoken French. She
indicated in her pre-study questionnaire that she occasionally listened to authentic spoken French in her classrooms, on the internet, and sometimes on television. Table 6-11 presents the number of main IUs, supporting IUs and details produced by Erica during all eight assessment sessions of the study.

Table 6-11: Erica: the raw scores for the production of IUs.

<table>
<thead>
<tr>
<th>Texts</th>
<th>Number and percentage of idea units expected and observed</th>
<th>Main Idea Units</th>
<th>Supporting IUs</th>
<th>Details</th>
<th>Total IU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Exp.</td>
<td>Obs.</td>
<td>%</td>
<td>Exp.</td>
</tr>
<tr>
<td>NDA1</td>
<td></td>
<td>2</td>
<td>1</td>
<td>50</td>
<td>6</td>
</tr>
<tr>
<td>DA1</td>
<td></td>
<td>8</td>
<td>1</td>
<td>12.5</td>
<td>8</td>
</tr>
<tr>
<td>TA1</td>
<td></td>
<td>5</td>
<td>1</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Enrichment Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDA2</td>
<td></td>
<td>5</td>
<td>5</td>
<td>100</td>
<td>5</td>
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<td>16.6</td>
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<tr>
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<td>16.6</td>
<td>5</td>
</tr>
<tr>
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<td></td>
<td>2</td>
<td>1</td>
<td>50</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. Exp. = expected (the IUs embedded in the text and expected in learner production); Obs. = observed (the actual number of IUs produced by the learner)

As can be seen in Table 6-11, the results for the total number of IUs suggests that Erica’s production of IUs was quite uneven, indicating an increase and decrease in her listening development. Similar to Chris and Dan, the microgenetic analysis of Erica’s IU production also shows that her post-test scores are higher than those of her pre-test. Like Dan, Erica produced a total of 40 IUs. Remarkably, Erica was one of the two learners who were able to recall two IUs during TA4.

Figure 6-19 graphically represents Erica’s total number of IUs produced throughout the assessment sessions. The graph includes the number of IUs embedded in
the texts (all blue bars) and the number of IUs recalled by Erica independently during NDA sessions and the unassisted portions of DA and TA sessions.

![Chart of Idea Units]

Note. IUs = idea units; EP = enrichment program

Figure 6-19: The number of IUs produced by Erica independently per each session.

6.5.6 Mona

Mona had studied French for three years in high school and three semesters in college. She also had a one week sojourn in France during her senior year of high school. Like most of her peers, she was highly motivated to learn French and was really looking forward to participating in the study. Table 6-12 portrays the number of main IUs, supporting IUs and details produced by Mona during all assessment sessions of the study.
Table 6-12: Mona: the raw scores for the production of IUs.

<table>
<thead>
<tr>
<th>Texts</th>
<th>Number and percentage of idea units expected and observed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main Idea Units</td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
</tr>
<tr>
<td>NDA1</td>
<td>2</td>
</tr>
<tr>
<td>DA1</td>
<td>8</td>
</tr>
<tr>
<td>TA1</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enrichment Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDA2</td>
</tr>
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<td>TA2</td>
</tr>
<tr>
<td>TA3</td>
</tr>
<tr>
<td>TA4</td>
</tr>
</tbody>
</table>

*Note. Exp. = expected (the IUs embedded in the text and expected in learner production); Obs. = observed (the actual number of IUs produced by the learner)*

As depicted in Table 6-12, Mona produced 39 IUs out of 181. Her scores indicate that an increase the number of IUs recalled up to 8 (DA2) followed by a decrease to 5 acceptable IUs (e.g. TA2). This certainly points to the uneven changes in Mona’s listening development. At the end of the study, she demonstrated the capacity to produce two IUs during TA4 and was one of the two students who were able to deal with the ‘very far’ transfer task. As in Michel’s case, Mona’s positive attitude and enthusiasm toward her participation in the study and active engagement in the listening activities may have contributed to the micro-gains concerning her listening development.

Figure 6-20 graphically represents Mona’s total number of IUs produced throughout the assessment sessions. The graph comprises the number of IUs embedded in the texts (all blue bars) and the number of IUs recalled by Mona independently during NDA sessions and the unassisted portions of DA and TA sessions.
Lora was a student with low intermediate language proficiency. She had studied French for four years in high school and one semester in college. With regard to her exposure to authentic aural French, she indicated in her pre-study questionnaire that she spent 16 days in Paris and occasionally watched French TV programs in her dormitory room. Table 6-13 displays the number of main IUs, supporting IUs and details produced by Lora during all eight assessment sessions.

Note. IUs = idea units; EP = enrichment program

Figure 6-20: The number of IUs produced by Mona independently per each session.

6.5.7 Lora

Lora was a student with low intermediate language proficiency. She had studied French for four years in high school and one semester in college. With regard to her exposure to authentic aural French, she indicated in her pre-study questionnaire that she spent 16 days in Paris and occasionally watched French TV programs in her dormitory room. Table 6-13 displays the number of main IUs, supporting IUs and details produced by Lora during all eight assessment sessions.
Lora produced a total of 26 IUs and was one of the two learners who produced the lowest IUs score (see also Michel’s data in 6.5.8). In fact, Lora did not seem to be fully engaged in the study and did not invest much effort in the listening activities. Thus, Lora’s low score may be an indication of her low motivation and her rather negative stance toward participation in the study, which might have had an impact on her very moderate listening development.

Figure 6-21 graphically represents Lora’s total number of IUs produced throughout the assessment sessions. The graph contains the number of IUs embedded in the texts (all blue bars) and the number of IUs recalled by Lora independently during NDA sessions and the unassisted portions of DA and TA sessions.
6.5.8 Michel

At the time of study, Michel exhibited a low level of listening proficiency. He had studied French for one year in high school and two semesters in college. However, what is noteworthy about Michel is that he had a very intense interest in learning modern languages, including French. In comparison to the other participants in the study, Michel had minimal exposure to authentic French discourse. In contrast to Lora, who did not exhibit a high degree of motivation, Michel actively and enthusiastically participated in the activities designed for the study and even asked the researcher to provide him with some extra listening exercises in order to improve his listening skills at home. Table 6-14

Note. IUs = idea units; EP = enrichment program

Figure 6-21: The number of IUs produced by Lora independently per each session.
presents the number of main IUs, supporting IUs and details produced by Michel during all assessment sessions of the study.

Table 6-14: Michel: the raw scores for the production of IUs.

<table>
<thead>
<tr>
<th>Texts</th>
<th>Number and percentage of idea units expected and observed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main Idea Units</td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
</tr>
<tr>
<td>NDA1</td>
<td>2</td>
</tr>
<tr>
<td>DA1</td>
<td>8</td>
</tr>
<tr>
<td>TA1</td>
<td>5</td>
</tr>
<tr>
<td>Enrichment</td>
<td></td>
</tr>
<tr>
<td>NDA2</td>
<td>5</td>
</tr>
<tr>
<td>DA2</td>
<td>4</td>
</tr>
<tr>
<td>TA2</td>
<td>6</td>
</tr>
<tr>
<td>TA3</td>
<td>6</td>
</tr>
<tr>
<td>TA4</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note.* Exp. = expected (the IUs embedded in the text and expected in learner production); Obs. = observed (the actual number of IUs produced by the learner)

Michel showed moderate development in his IU production. In contrast to the pre-test assessments, the recalls produced by Michel during the second stage of the study bear witness to a slightly increasing degree of acceptable IUs. Michel’s total IUs count was the lowest in the experimental cohort (25 out of 181), almost two times lower than Fée’s or Chris’s (48). However, from the NDA1 to the TA2 sessions Michel exhibited instances of development in relation to IU production which may have been influenced by his exposure to DA interventions and the enrichment program as well as his positive stance vis-à-vis French language learning in general as well as his active engagement in the listening activities.

Figure 6-22 graphically represents Michel’s total number of IUs produced throughout the assessment sessions. The graph includes the number IUs embedded in the
texts (all blue bars) and the number of IUs recalled by Michel independently during NDA sessions and the unassisted portions of DA and TA sessions.

![Chart of Idea Units](image)

*Note.* IUs = idea units; EP = enrichment program

Figure 6-22: The number of IUs produced by Michel independently per each session.

### 6.6 Conclusion

This chapter reports on the results of a series of quantitative analyses providing insights into the microgenesis of L2 intermediate learners’ listening ability to understand authentic oral French. The analysis of aggregate data allows for the drawing of some conclusions regarding learners’ unassisted listening performance. The regressive and progressive moves shown via central tendency analysis and observed throughout all study
stages provide empirical support for Vygotsky’s view on the uneven and conflicting nature of development.

The unequal dispersion of SD and range scores indicates that even though during the enrichment program all participants were offered instruction based on their actual performance during the listening tasks, they did not make uniform microgenetic progress with regard to listening comprehension. This finding provides empirical support for the Vygotskyan claim that the trajectory of potential development varies independently of actual development and the latter cannot be used to predict the former. However, the developmental discrepancy illustrated by means of the SD and range scores may also be due to the differences in L2 learning background as well as to the learners’ individual difficulties related to L2 linguistic and cultural competence (see Chapter 7 for more discussion on individual difficulties revealed during the mediated performance).

The next series of analysis was run by comparing the mean differences between pre-mediated listening performance (NDA1/DA1-IP) and four transfer conditions designed for tracking the microgenetic development of learners’ listening ability. This analysis, performed via paired t-test, revealed that the mean differences for NDA1/DA1-IP vs. TA1-IP and NDA1/DA1-IP vs.TA2-IP combinations were statistically significant whereas there were no significant mean differences for NDA1/DA1-IP vs. TA3-IP and NDA1/DA1-IP vs. TA4-IP combinations. Thus, the results obtained through a series of descriptive and inferential statistical analyses demonstrate that the findings of pre-test and post-test sessions show an increase in IU production (except for TA3-IP and TA4-IP sessions). The overall production of acceptable IUs suggests that the students developed as a result of DA-MP interventions and the enrichment program but given the
incremental nature of L2 listening development, it is still subject to further development. Thus, the IUs production indicates that development is not a quick process and requires a great deal of mediation, time and learner commitment.

The aggregate data analysis was supplemented by means of the disaggregated data analysis of the unassisted performance of each learner. This allowed for tracking individual developmental tendencies of learners’ unassisted listening recalls. It was shown that the IU production of some learners took a rather an even track (e.g. Chris and Dan), whereas other learners tended to produce IUs unevenly (Lora, Michel, Erica, Fé, Mona). It was also found that learners’ IU production was higher during the post-test (except for TA4) than during the pre-test. This phenomenon may be attributed not only to the effect of instruction offered in the course of the enrichment program but also to mediation provided during dynamic portions of all DA and TA sessions. The detailed qualitative analyses of the effects of mediation on the microgenesis of L2 listening development and the diagnostic capacities of DA are presented in Chapter 7 and Chapter 8 respectively.
Chapter 7

Mediated Listening Performance: Learning and Assessing/Teaching within the Zone of Proximal Development

7.1 Introduction

The goal of the present chapter is to contribute to those SCT- and DA-based studies that have researched the effects of mediation on L2 development. In SCT, development is viewed not just as improved performance (i.e., changes in product) but it is also regarded as the changes in the process through which learner performance improves over time. Additionally, the developmental process is explored and documented in the changes in mediation and learners’ receptivity to mediation which should be constantly calibrated to the learner’s ZPD. More precisely, this chapter adds to the body of knowledge on L2 development by focusing on the mediational moves, termed here mediational strategies, produced by the teacher (or mediator) during the mediated portions of study sessions as well as on the learners’ responsiveness to mediation or responsive moves.

The chapter considers further the specifics of Vygotsky’s claim on the conflictual nature of development, taken up earlier in Chapter 6, that inevitably witnesses not only progression but also regression as naturally occurring characteristics of development in the ZPD. In this regard, Chaiklin (2003: 43) points out that “Vygotsky never assumed that learning related to the zone of proximal development is always enjoyable”. This can be attributed to the fact that the ZPD itself is comprised of unstable maturing functions.
Therefore, the ZPD, in itself, is not a magic formula that gives rise to a smooth, even and inevitable process of development. In relation to the DA framework, this means that development as well as assessment and instruction within the ZPD can be quite challenging and labor-intensive for both the teacher and the learner.

First, the chapter briefly reviews the SCT- and DA-based research on mediational moves and learners’ reciprocal moves with a special focus on L2 studies (section 7.2). Then, section 7.3 outlines the mediator’s strategies (MS henceforth) distilled on the basis of microgenetic analysis of listening development which occurred throughout the assessment sessions conducted during the present study. Section 7.4 presents and discusses examples of ineffective mediation that occurred throughout the DA-based assessments. Section 7.5 offers an inventory of learners’ responsive moves (RM henceforth) which was delineated on the basis of their responsiveness to mediation observed during the completion of the listening activities. In addition, section 7.5 discusses some of the insights on regression and progression gained through mediational dialogue between the mediator and the learners. The description of the mediator’s strategies and learners’ moves is supplemented and fine-tuned via frequency analysis of moves in section 7.6. All results are summarized in 7.7.

7.2. SCT- and DA-based research on the category of mediational moves

As discussed in chapter 4, the SCT framework reserves a privileged place for mediation as a means of understanding and promoting the process of development. After having analyzed Vygotskian, Piagetian and Feuerstein’s views on mediation, Haywood
and Lidz (2007:25) nicely summarize the importance of mediation and social interactions for human development:

... there are large individual differences in the need for mediation […], nobody is so intelligent that he or she does not require any mediation to achieve adequate cognitive development. […] Tarzan to the contrary notwithstanding, human beings do not seem to be able to develop cognitively in social isolation!

Haywood and Lidz warn, though, that not all social environments provide adequate mediation needed for the effective promotion of cognitive processes, which is why they especially acknowledge mediation offered in learning situations. With regard to the effectiveness of mediation in educational settings, Lantolf and Thorne (2006: 356) caution that “it cannot be offered in a haphazard, hit-or-miss fashion”. Following the SCT tradition in DA research, they insist that mediation should account for individuals’ actual level of development as well as being continuously adjusted to the dynamics of learners’ ZPD, i.e. their potential for future development. Additionally, mediation should be regularly re-adjusted to the changes and gains in the learners’ development.

As noted by Haywood and Lidz (2007), the provision of mediation is often the most intimidating aspect of DA application, specifically for those assessors or educators who have never tried it in practice. DA research, including L2 DA research, has made several efforts to develop suggestions for carrying out mediation during the assessment procedure. Among the first mediational inventories outlined on the basis of DA applications are the Rating scale of mediation (Lidz, 1991), the Regulatory scale of implicit to explicit tutor’s help (Aljaafreh & Lantolf, 1994), the Typology of mediator’s mediational moves and the Learner reciprocity typology (Poehner, 2005). The following
paragraphs focus exclusively on the mediational inventories proposed by L2 research, i.e. Aljaafreh and Lantolf and Poehner, due to their particular relevance to the present study.

Aljaafreh and Lantolf (1994) investigated the effects of mediation on the improvement of L2 grammar use as reflected in written performance and proposed the regulatory scale of implicit to explicit tutor’s assistance that was outlined after the completion of the study. Through a close analysis of tutor-learner dialogic interactions, they identified twelve mediational moves performed by the tutor during the study sessions (see Figure 7-1).

<table>
<thead>
<tr>
<th></th>
<th>Tutor asks the learner to read, find the errors, and correct them independently, prior to the tutorial.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Construction of a collaborative frame prompted by the presence of the tutor as a potential dialogic partner.</td>
</tr>
<tr>
<td>2</td>
<td>Prompted or focused reading of the sentence that contains the error by the learner or the tutor.</td>
</tr>
<tr>
<td>3</td>
<td>Tutor indicates that something may be wrong in a segment (e.g., sentence, clause, line)-is there anything wrong in this sentence?</td>
</tr>
<tr>
<td>4</td>
<td>Tutor rejects unsuccessful attempts at recognizing the error.</td>
</tr>
<tr>
<td>5</td>
<td>Tutor narrows down the location of the error (e.g., tutor repeats or points to the specific segment which contains the error).</td>
</tr>
<tr>
<td>6</td>
<td>Tutor indicates the nature of the error, but does not identify the error (e.g., There is something wrong with the tense marking here.).</td>
</tr>
<tr>
<td>7</td>
<td>Tutor identifies the error (.You can’t use an auxiliary here.).</td>
</tr>
<tr>
<td>8</td>
<td>Tutor rejects learner’s unsuccessful attempts at correcting error.</td>
</tr>
<tr>
<td>9</td>
<td>Tutor provides clues to help the learner arrive at the correct form (e.g., .It is not really past but something that is still going on.).</td>
</tr>
<tr>
<td>10</td>
<td>Tutor provides the correct form.</td>
</tr>
<tr>
<td>11</td>
<td>Tutor provides some explanation for use of the correct form.</td>
</tr>
<tr>
<td>12</td>
<td>Tutor provides examples of the correct pattern when other forms of help fail to produce an appropriate responsive action.</td>
</tr>
</tbody>
</table>

Figure 7-1: Regulatory scale-implicit (strategic) to explicit, (Aljaafreh & Lantolf, 1994: 471)
Referring to Van Der Aalsvoort and Lidz (2002), Poehner (2005) argued that in studying the mediator-learner interactions attention should be given not only to the quality of the mediator’s help but also to the learner’s response to mediation. With this in mind, Poehner (2005) constructed two inventories: (1) a menu of the mediator’s moves and (2) a menu of learners’ reciprocating moves. In the context of Poehner’s study, the mediator’s moves, reproduced in Figure 7-2, were intended to develop the learners’ ability to use perfect-imperfect aspects in L2 French narratives.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Helping Move Narration Along</td>
</tr>
<tr>
<td>2.</td>
<td>Accepting Response</td>
</tr>
<tr>
<td>3.</td>
<td>Request for Repetition</td>
</tr>
<tr>
<td>4.</td>
<td>Request for Verification</td>
</tr>
<tr>
<td>5.</td>
<td>Reminder of Directions</td>
</tr>
<tr>
<td>6.</td>
<td>Request for Renarration</td>
</tr>
<tr>
<td>7.</td>
<td>Identifying Specific Site of Error</td>
</tr>
<tr>
<td>8.</td>
<td>Specifying Error</td>
</tr>
<tr>
<td>9.</td>
<td>Metalinguistic Clues</td>
</tr>
<tr>
<td>10.</td>
<td>Translation</td>
</tr>
<tr>
<td>11.</td>
<td>Providing Example or Illustration</td>
</tr>
<tr>
<td>12.</td>
<td>Offering a Choice</td>
</tr>
<tr>
<td>13.</td>
<td>Providing Correct Response</td>
</tr>
<tr>
<td>14.</td>
<td>Providing Explanation</td>
</tr>
<tr>
<td>15.</td>
<td>Asking for Explanation</td>
</tr>
</tbody>
</table>

Figure 7-2: Mediation typology, (Poehner, 2005:160).

The analysis of learners’ moves in response to the mediation allowed Poehner (2005:183) to create the learner reciprocity typology in which the moves were “arranged according to extent to which each move represents the learners’ ability to take on
responsibility for their performance”. The learner’s reciprocating moves from Poehner (2005) are reproduced in Figure 7-3 below.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Unresponsive</td>
</tr>
<tr>
<td>2.</td>
<td>Repeats Mediator</td>
</tr>
<tr>
<td>3.</td>
<td>Responds Incorrectly</td>
</tr>
<tr>
<td>4.</td>
<td>Requests Additional Assistance</td>
</tr>
<tr>
<td>5.</td>
<td>Incorporates Feedback</td>
</tr>
<tr>
<td>6.</td>
<td>Overcomes Problem</td>
</tr>
<tr>
<td>7.</td>
<td>Offers Explanation</td>
</tr>
<tr>
<td>8.</td>
<td>Uses Mediator as a Resource</td>
</tr>
<tr>
<td>9.</td>
<td>Rejects Mediator’s Assistance</td>
</tr>
</tbody>
</table>

Figure 7-3: Learner reciprocity typology, (Poehner, 2005:183)

Similar to Poehner (2005), the present study provides two types of moves: (1) the mediator’s strategies offered to the learners while working within their L2 listening ZPDs (see Figure 7-4, section 7.3) and (2) the learners’ responsive moves (see Figures 7-5 and 7-6, section 7.5). As in Aljaafreh and Lantolf (1994) and Poehner (2005), the menu of moves proposed here was not outlined in advance but distilled as a result of close “doubled-side analysis” (in Poehner’s term) of the sessions during which teacher-learner dialogic interactions occurred. The following sections offer description of the mediator’s (7.3; 7.4) and learner’s (7.5; 7.6) moves along with short excerpts selected from the mediated portions of DA and TA sessions.
7.3 Mediator’s strategies: assessment and teaching in the zone of proximal development

The purpose of the mediational strategies produced by the mediator was twofold, i.e. (1) to diagnose the source of the problems that impedes comprehension of spoken French and in so doing (2) to offer the learners an opportunity to improve their L2 listening ability as well as to promote learners’ L2 development in general. Figure 7-4 summarizes the outlined meditational strategies. According to Aljaafreh and Lantolf’s (1994) suggestions, the strategies are arranged from the most implicit (lower numbers) to the most explicit (the higher numbers).

<table>
<thead>
<tr>
<th></th>
<th>Accepting Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Structuring the text</td>
</tr>
<tr>
<td>3</td>
<td>Replay of a passage; Replay of a segment (from a passage); Replay of a detail (from a segment)</td>
</tr>
<tr>
<td>4</td>
<td>Asking the Words</td>
</tr>
<tr>
<td>5</td>
<td>Identifying a Problem Area</td>
</tr>
<tr>
<td>6</td>
<td>Metalinguistic Clues</td>
</tr>
<tr>
<td>7</td>
<td>Offering a Choice</td>
</tr>
<tr>
<td>8</td>
<td>Translation</td>
</tr>
<tr>
<td>9</td>
<td>Providing a Correct Pattern</td>
</tr>
<tr>
<td>10</td>
<td>Providing an Explicit Explanation</td>
</tr>
</tbody>
</table>

Figure 7-4: Typology of mediator’s strategies occurred during Dynamic Assessment of L2 listening comprehension.

As discussed in chapters 4 and 5, this study adheres to the interactionist approach to DA that privileges mediation determined on the basis of mediated dialoguing between the teacher and the learner during dynamically conducted assessments. Although Figure
7-4 presents the identified mediator’s strategies arranged hierarchically from implicit to explicit, their use was not predetermined in advance and was adjusted to the quality of listening performance of each learner.

The arrangement of the mediator’s strategies parallels Aljaafreh and Lantolf’s (1994) regulatory scale in that it follows the principle of abstract to concrete and can be organized according to five major categories: managing the interactions; helping the learners to reconsider their recall; helping the learners to overcome the problem; enhancing listening comprehension and promoting L2 development. For example, Accepting Response, Structuring the Text and Replay are forms of mediation that helped manage the expert-learner interactions. Replay is a more explicit strategy than Accepting Response or Structuring the Text since it encouraged the learners to re-attempt their recall of a portion of a text a second time. Asking the Words, Identifying a Problem and Metalinguistic Clues were intended to help the learners to reconsider their recalls on the basis of an identified problem. Asking the Words was a more explicit strategy than Replay since its use indicated that re-listening was not sufficient for the learners to understand a passage, or a segment on their own and required the mediator to resort to a more explicit form of mediation. Identifying a Problem Area shows an even greater degree of explicitness because this strategy indicates that the learners could not produce an acceptable recall on the basis of the words discussed with the mediator. The identification of a concrete problem related to one of the L2/C2 areas is considered here to be less explicit than the use of Metalinguistic Clues since the former strategy implies that the learners were not able to identify a problem area on their own and needed a concrete metalinguistic clue to trigger their text comprehension. Offering a Choice and
Translation refer to the category ‘helping the learners to overcome the problem’ and are meant to support learners’ text comprehension in a more explicit way. Offering a Choice is more explicit than Metalinguistic clues as it attempts to support the learner by introducing one correct and one incorrect pattern (or a word). The use of Translation increases the level of explicitness in a more substantial way since it was used when the assistance based on a choice was not sufficient for the learners to understand a pattern (or a word) in question because of problems related to word recognition or the absence of a word in the learner’s vocabulary. Providing a Correct Pattern and Providing an Explicit Explanation fall under the category of promoting L2 development since the former is intended to enhance learners’ ability to recognize the words by matching the aural form of words with their written forms and the latter involved the mediator’s explanation concerning learners’ individual L2/C2 problems that emerged throughout the MP-assessments. Providing a Correct Pattern represents the most explicit strategy because it required the mediator to repeat the speakers’ words for the learners and often to write them down. As for Providing an Explicit Explanation, this strategy was used in accordance with DA principles that seek to address and immediately remediate specific problem areas in order to advance development.

It should be specified that the strategies, presented in Figure 7.3, regularly and typically occurred during each dynamically conducted assessment and for this reason they were selected as the major strategies since they proved to be effective in promoting learners’ listening ability. Although the same strategies were used with every learner, they were not used in precisely the same order. In fact, the qualitative microgenetic analysis demonstrates that all the outlined strategies emerged in response to individual
difficulties experienced by the learners during mediated listening performance. Similar to Poehner’s (2005) study, the DA-based mediation did not always follow the hierarchical order of strategies listed in Figure 7-3. The strategic mediation was tightly linked to the learners’ needs and the mediator had to adjust her assistance, going back and forth, depending on the specific response of the learners. From a SCT perspective, the erratic ordering of strategies during any given mediational session can be mainly attributed to the fact that in this study learning and assessment/teaching occurred in the learners’ ZPDs.

Before launching into the analysis of the researcher’s assistance, several important points regarding this menu of mediational strategies should be pointed out. First, these strategies are not prefabricated but were uncovered as a result of a close analysis of interactions that occurred during the DA sessions. Second, it should be kept in mind that the mediator’s strategies were used while working with intermediate L2 learners studying French. It is possible, then, that some of the strategies would not be likely to emerge during DA-based sessions involving beginning or advanced L2 learners. Third, the mediational strategies discussed in the next subsections were tightly interrelated and sometimes one move immediately followed another. Therefore, although each protocol is meant to illustrate one specific strategy, it can contain two or more different strategies, since it was impossible to separate them from one another.

It is assumed here that but rather all mediation in the ZPD should be strategic since from the perspective of SCT mediation should firmly take into account learners’ response to it. In this sense, mediation does not equal assisted performance.
7.3.1 Accepting response

This mediational strategy was used by R to indicate the appropriateness of idea units (IU) recalled by the learner during MP-DA and MP-TA sessions. Generally, R provided this strategy to encourage the learners whenever they recalled or responded correctly. The excerpt below is taken from Fé’s TA1-MP session and focuses on Fé’s recall of the following segment from the TA1 text:

**Extract 1 (from the TA1 text):**

The speaker (female) said:

*… je dirais … la diversité… déjà en France on mange beaucoup-beaucoup de choses différentes… parce que… ici… j’ai l’impression que c’est assez… assez redondant…* 

… I would say… the diversity… in France people eat more diverse things... because... here... I have the impression that it’s rather... rather redundant...

During her TA1-IP, after two listenings to the text, Fé recalled the above extract as follows:

... uh… first she just said there’s a lot of differences… there’s … she said... uh... diversity...uh… she said uh… I don’t know if she said anything before…

In Protocol 1, Fé appears to produce an acceptable recall of the segment in question (line 1) following two additional listenings that occurred during the mediated portion of her TA1.

**Protocol 1**

1. F. oh!... here it’s redundant and there’s more diversity in France...
2. R. très bien... that’s it...ok
3. F. yeah... I remember her saying redundant...
4. R. yes redundant but also we need to understand if she refers to the United States or to France...
5. F. right..
Protocol 1 is representative of the mediator indicating the correctness of the learner’s response (line 2). Moreover, R indicates the acceptability of Féée’s recall twice: in line 2 she provides encouragement and, in line 4, she stresses the importance of this segment since it includes the speaker’s point necessary for understanding the whole passage of the text. Additionally, Protocol 1 demonstrates the effectiveness of replay as a form of mediation. Replay is discussed in more detail in section 7.3.3.

7.3.2 Structuring the text

This mediational strategy was usually made right after the independent recall, mainly when the learners produced a poor quality recall. The purpose of the strategy was to appeal to the learners’ top-down and bottom-up knowledge. Protocol 2, taken from Mona’s DA1-MP, provides an illustration of how this form of mediation functioned.

Protocol 2:

1. R. so I think that in this text there is a sort of structure... because first he discusses what?
2. M. breakfast...
3. R. ... and then?
4. M. and then uh... like dinner...
5. R. ... diner? ... did he say dinner?... so the first is about breakfast=
6. M. = breakfast... I guess he talked about lunch but... uh.. (long pause)
7. I heard him talking about coffee... and then I heard him talking about like beef...
8. and duck and meet... and he kind of talks about desserts...
9. R. ok so it’s kind of breakfast, coffee, then meet, and vegetables? =
10. M. = right!... vegetables...
11. R. and desserts... this kind of things... so there is a sort of structure...

R’s question in line 1 is intended to clarify Mona’s general understanding of the DA1 text. As seen in lines 6-8, Mona encounters difficulties while structuring the text. As
a result, in line 9, R intervenes by offering her overt mediation, i.e. she structures the text for Mona, by reminding her ‘vegetables’, the point that Mona recalled in her DA1-IP but forgot to mention during this DA1-MP interaction for an unclear reason.

7.3.3 Replay

Generally this mediational strategy included R’s invitation to re-listen to a portion of the text, i.e. a passage of a text, a segment from a particular passage or a detail from a segment. It was used in cases when the learners produced poor independent recalls and R had to replay portions of a text in order to facilitate text comprehension. This strategy included the following three sub-strategies arranged from implicit to explicit: listening to a passage from the text; listening to a segment from a passage; focused listening to a detail from a segment.

7.3.3.1 Listening to a passage

This type of replay usually occurred several times in each DA-MP and TA-MP session since on average all texts contained 3-4 sections. In general, this strategy was used in order to refresh the content of a passage for the learner and normally occurred before the beginning of the discussion of a passage. However, if a learner was still unable to produce an acceptable recall of the passage, it was replayed as many times as necessary, depending on the learner’s need. Protocol 3, taken from Mona’s TA1-MP, provides an example of such a replay. The mediator-learner interactions in Protocol 3 are
focused on the discussion of the second passage from the TA1 text, presented in Extract 2.

**Extract 2 (from the TA1 text):**

The speaker said:

... *je dirais qu'on mange moins de poulet en France... j'ai l'impression qu'ici on mange du poulet tout le temps aux Etats-Unis... euh... en France on mange un peu moins de poulet et un peu plus de viande rouge cuite pas autant qu'ici ... cuite ou on voit encore ou il est un peu encore rouge... quand on coupela viande y a encore un petit peu de sang...*

... I would say in France people eat less chicken... I have the impression that here, in the United States, people eat chicken all the time... uh... in France people eat less chicken and a bit more red meat... medium-rare meat... cooked in a way that you can see ... it has red color... if you cut this meat, there is a bit of blood inside...

**Protocol 3**

1. R. ... ok now [...] let’s listen to this...

**Listening to Extract 2 from the TA1 text**

2. M. uh...I think... she says something about... uh I think she likes the chicken
3. in France... because ... uh chicken in America is overcooked...
4. she said the word *cuite* and then she says something about red meat...
5. but I don’t quite catch that...
6. R. ... ok... yeah... she ... she definitely... it’s something about chicken... and
7. ... definitely she is trying to contrast chicken [consumption] in France and in
8. America... but you need to... to... listen again because...
9. ... what’s her point about chicken?[^62]

Protocol 3 demonstrates that after the additional listening Mona’s recall of the passage in question contains only unacceptable IUs and is made up of isolated words that she could pick up from the passage (lines 2-4). In fact, this recall is similar to what Mona produced during her independent recall earlier in the session: “then she says... uh...

[^62]: This episode from Mona’s TA1-MP is continued in protocol 4, in the next section.
but… she says something about chicken and how it’s cooked in France but I didn’t quite catch it”. In line 5 Mona overtly states that she experiences difficulties comprehending the speaker’s point embedded in this passage. It is clear to R that Mona’s understanding of the passage is minimal, at which point R decides to try a more explicit move, i.e. to replay a specific segment from the passage in question.

7.3.3.2 Listening to a segment from a passage

This strategy related to replay included listening to a segment and was used when it was clear to R that the learners’ text comprehension was impeded by recognition of certain lexical items or grammatical structures embedded in a particular passage. Protocol 4 from Mona’s TA1-MP illustrates this strategy. The discussion is based on the following segment from the second passage of the TA1 text:

**Extract 3 (from the TA1 text):**

The speaker said:

... *je dirais qu’on mange moins de poulet en France... j’ai l’impression qu’ici on mange du poulet tout le temps aux Etats-Unis... euh... en France on mange un peu moins de poulet et un peu plus de viande rouge ...*

... I would say in France people eat less chicken.... I have the impression that here, in the United States, people eat chicken all the time... uh… in France people eat a bit less chicken and a bit more red meat...

**Protocol 4**

**Listening to the segment from the passage of the TA1 text**

1. R. so... (rising intonation)
2. M. uh ... that ... in France they have chicken but they don’t eat it as much as they do in America... uh... because in America they eat chicken all the time
3. but in France they don’t eat chicken as much as they eat red meat...
4. R. so... instead of chicken they eat more = (rising intonation)
6. M = more red meat =
7. R. = exactly...

As can be seen in Protocol 4, the less implicit strategy, i.e. replay of a segment, used by R suddenly triggers Mona’s appropriate recall of the segment that she in fact produces on her own, with no help from R. Mona’s recall in lines 2-4 provides evidence that in terms of lexis, the segment is accessible to her and that apparently, in the earlier interactions (see Protocol 3), she experienced difficulties with word recognition. In this particular case, the recognition of well-known words was facilitated by less implicit mediation in the form of segment replay.

7.3.3.3 Focused listening to a detail

This mediational strategy consisted of listening to a detail from a segment and was provided when learners were not able to recognize a particular lexical item or grammatical structure (e.g. a verb in the conditional tense) crucial for understanding of a passage. Protocol 5 from Michel’s DA1-MP exemplifies how R invites him to listen to a detail from a segment in order to improve his comprehension. The protocol is based on the discussion of the following extract from the DA1 text:

Extract 4 (from the DA1 text):
The speaker said:
... ce que je mange ici... c’est les pizzas, hamburgers...les desserts...
... what I usually eat here [in the US] ... it’s pizzas, hamburgers... desserts...

Protocol 5

1. M. we are... we usually eat like pizza, hamburgers and desserts... (mumbling)
2. R. who?
3. M. we do... the Americans...
4. R. Americans or he does?
5. M. Americans...
6. R. ok... try to understand... who eats... who eats les desserts, les hamburgers etc.

**Listening to a detail from the segment**

7. M. he does...
8. R. how do you know it?
9. M. *je mange*... so... he is talking about himself... he eats usually... normally...
10. ... pizza, hamburgers and desserts...

Michel’s recall contains an error and demonstrates that he confuses ‘who is doing what’ in this segment (line 1). To be sure, R overtly poses a question about the subject (line 2) and receives a confirmation that Michel did not capture this detail and therefore, requires additional mediation. In line 6, R overtly directs Michel to focus his attention on ‘who is doing what’ in the segment. This mediational move is successful since, after an additional listening, Michel responds correctly (line 7) and produces acceptable IUs (lines 9 and 10).

**7.3.4 Asking the words**

This form of mediation was provided when the learners were unable to produce any kind of acceptable recall after one or two additional listenings to a passage or an entire text (e.g. the TA4 text which was short in length, i.e. 20 seconds). In such cases, R usually asked the learners the following type of questions, e.g.: “What kind of words did you hear?” and/or “Can you put these words together?” It is important to note that the need for such a strategy was observed throughout all stages of the study, i.e. at the beginning as well as at the end of study sessions. In fact, R was compelled to use it in
order to tease out at least separate words from the students and then to help them make sense of these words. The following excerpt, taken from Dan’s TA4 session, is illustrative of the mediator helping to achieve better text comprehension. The illustration begins with a full version of Dan’s independent recall of the text *Léon de Bruxelles* produced during his TA4-IP:

... OK… Léon de Bruxelles … it sounds like … I know… I heard … I am saying… uh … at the … it’s beautiful to sit there … and… it’s anything like *frites*

This independent performance clearly shows Dan’s inability to understand the TA4 text. This is hardly surprising since this text, a radio-advertisement, was the most difficult text included in the study. After two additional listenings to the text during his TA4-MP, Dan still exhibited comprehension difficulties and R proceeded to the *Asking the Words* strategy, exemplified in Protocol 6.

**Protocol 6**

**Dan – TA4-MP**

1. R. What kind of words did you hear? You said fries...
2. D. yeah... frites...
3. R. frites... what else?
4. D. *Léon de Bruxelles... c’est belle*…
5. R. and then?... what else?
6. D. *les autres...* [long silence]… *je ne me souviens pas* as for others ... [long silence]...I don’t remember...

In line 1, R asks Dan a question about the words that he picked up from the text but Dan’s response in line 2 induces her to tease out more information, and she adamantly poses questions (lines 3 and 5). In fact, Dan’s struggle with the TA4 text is not

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63 See also Protocol 4 in chapter 8 that exemplifies this mediational move, i.e. asking the words, occurred in an initial assessment. Protocol 4 is based on an excerpt taken from Michel’s DA1-MP which occurred at the beginning of the study.
unexpected, given its difficulty. In Dan’s case the use of asking the words helped to reveal that his comprehension of the TA4 text was minimal at best and emphasized the need for the provision of further more explicit mediation.

7.3.5 Identifying specific problem area

This strategy provided valuable information to the mediator regarding the underlying sources of L2/C2 problem areas that triggered breakdowns of text comprehension. A representative example of this mediational strategy is given below; the example is taken from Erica’s TA3-MP and begins with an extract from the TA3 text.

Extract 5 (from the TA3 text):

The speaker said:

... « fumeur/non-fumeur ? » ... dès l’an prochain cette question rituelle pourrait bien disparaître de tous les lieux publics...

... “smoker /non smoker?”... beginning next year this ritual question could disappear from all public places ...

Protocol 7

After listening to this part

1. E. this question is gonna disappear in a couple of places...
2. R. yeah but you say ‘is gonna disappear’ ... but he is not really ... this is grammar...
3. ... actually this is the idea ... but ... uh... he is not saying va disparaitre right? =
4. E. = right... =
5. R. = he says... (rising intonation)
6. E. he said like ...I thought prochain like ‘soon’... like soon this question
7. R. no-no-no... I am talking about the verb...\(^{64}\)

\(^{64}\) This episode from Erica’s TA3-MP is continued in protocol 8.
The main purpose of R’s mediation in this episode was to help the learner improve her recall (line 1), which was not accurate: Erica failed to recognize *pourrait*, the present conditional of *pouvoir* (can; to be able to), and recalled it as the *future immediate* tense. This, in itself, was not surprising since all learners tended to confuse the conditional and the future tenses in their recalls (see also Chapter 8, section 8.6.1). In lines 3 and 7, R overtly directs Erica’s attention to the portion of her recall that contains an error.

As exemplified in Protocol 7, identification of the problem area often inevitably involved certain metalinguistic terms (line 7). In some cases the use of this move triggered text comprehension but in other cases (e.g. Erica’s case presented in Protocol 7) the learners needed more explicit help and required R to resort to more technical metalinguistic terms, such as those discussed in the next section.

### 7.3.6 Metalinguistic clues

In many cases the involvement of metalinguistic clues was helpful for the learners to correct errors and, in so doing, to improve their text comprehension. Protocol 8 continues to analyze the episode taken from Erica’s TA3-MP in which the learner struggled to recognize the verb *pouvoir* in the present conditional (see Protocol 7). The protocol below, which occurred after an additional listening to the passage of the TA3 text (see Extract 5 from the TA3 text in 7.3.5), captures mediator-learner interactions involving a metalinguistic clue:

**Protocol 8**

**Additional listening**
1. R. here… cette question rituelle … (rising intonation)
2. E. … pourrait bien =
3. R. = pourrait bien… what’s that pourrait?
4. E. uh…uh…
5. R. pourrait... do you recognize this word?
6. E. yeah but.... uh... pourrait like to be able to?
7. R. pourrait... la question pourrait bien disparaitre…what kind of tense is it ?
8. E. uh... imperfect? oh ! no! that’s pouvait... pourrait is conditional… could…

Protocol 8 provides evidence that the ability to recognize conditional verbal forms lies in Erica’s ZPD but is not yet fully matured. This was established through a mediated dialogue during which R had to gradually increase the level of explicitness by asking her first, a question about the word (line 12) and then, a question, containing a metalinguistic clue, about the tense (14). The last question was sufficient for Erica to overcome the tense recognition problem identified by R earlier in this episode (see also Protocol 7).

7.3.7 Offering a choice

Offering a Choice was another form of mediation that helped the learners to improve their text comprehension and typically contained one correct and one incorrect pattern. Anton (2009) and Poehner (2005), whose studies dealt with learners producing narratives in the past tenses, described this strategy as a useful technique to differentiate whether learners have some understanding of the structure in question or not. In the context of the present study, which deals with development of a receptive ability, it was ascertained that this mediational strategy can be also expanded to listening instruction since in many cases it triggered the recognition of the words that learners had acquired prior to the study but, for some reason, were unable to remember at the appropriate time.
Consider the following struggle to recognize the word *le lapin* (rabbit), observed during Mona’s initial DA.

**Protocol 9**

1. M. *jamais de …* *de la pain* ? … so and never bread? … no? (not sure)
2. R. ok... so say the word bread....
3. M. *pain* =
4. R. = with the article...
5. M. ... uh ... *le pain*
6. R. *le pain* ... ok... so *le pain* it’s not lapin... right?
7. M. oh!!! ... *lapin*... rabbit!
8. R. You know it [the word *lapin*]!

In line 1 Mona produces an erroneous recall of the utterance *jamais de lapin* and provides an English translation of what she thinks the utterance is about. R decides to prompt her by checking if she knows the word ‘bread’ in French (lines 2 and 4) and Mona correctly responds to her question (line 5). It is now clear to R that her erroneous recall derives from phonological confusion of [p] and [b] and she offers Mona a choice (line 6), which turns out to be crucial for the learner to recognize the word ‘rabbit’ (line 7).

**7.3.8 Translation**

This mediational technique was used when R identified that the learner did not know a particular lexical item or grammatical structure. This strategy occurred exclusively in situations when other, less explicit forms of mediation, did not help the

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65 See also 8.6.1 (Chapter 8) which provides an example of R’s translation of a grammar structure for the learner; the example is taken from Lora’s DA1-MP.
learners to produce a correct recall of a passage or a segment of a passage. In some cases, this form of mediation was offered as follows.

**Protocol 10**

1. M. I don’t know *salé*...
2. R. you don’t know... are you sure? How to say ‘salt’ in French?
3. M. *sel*...
4. R. yes *sel*... (pause)
5. M. [no response]
6. R. ... and when you say salty = (rising intonation)
7. M. = is it *salé*?
8. R. exactly...

Protocol 10 is based on an episode taken from Mona’s DA1-MP. In line 1 Mona provides evidence that she hears correctly the word *salé* used by the speaker and overtly states that this item is absent from her vocabulary. Before translating the word ‘salty’ for Mona, R asks her if she knows the word ‘salt’, hoping that this leading question would facilitate Mona’s guessing the word meaning on her own (line 2). R waits for her translation (line 4), and when she does not respond, R moves to a more explicit hint and provides a translation embedded in a semi-question (line 6). Immediately Mona correctly translates it but her rising intonation in line 7 reveals that she still relies on R’s support to be sure that she is on the right track and R responds affirmatively to her question (line 8).

**7.3.9 Providing a correct pattern**

This mediational strategy was generally used when other forms of mediation did not help learners improve their text comprehension. The provision of a correct pattern was the most explicit mediational technique since it occurred when the learners were
completely unable to decipher aural forms of well known or unknown words and R had
to provide them with a correct pattern. In the case of unknown words, R usually wrote
down the words for the learners so that they formed correct graphic and aural
representations of the lexical item in question. Consider the following extract from
Chris’s first DA session.

**Protocol 11**

1. C.: ok... I think what he found is *steak caché*...
2. R.: ... *caché*? ... and do you know the word ‘*haché*’?
3. C.: ... *haché*?
4. R.: (uses a specific cutting gesture)
5. C.: ... oh!... chopped up or ground? ... is it diced or ground up? =
6. R.: = ground up (R writes down the word *haché* for Chris)

In this example R had to increase the level of explicitness of her mediation in
order to correct an erroneous form of the word *haché* produced by Chris in line 1. In fact,
as seen in protocol 11, Chris experienced a double-sided problem regarding the word
*haché* (ground up): he was not able to decipher this word correctly (line 1) and also, as
his questions in line 5 demonstrate, this word was absent from his vocabulary.

**7.3.10 Providing explicit explanation**

This strategy is consistent with DA principles and was used when R identified
that the learner experienced problems with a particular L2 or C2 item. In such cases, R
provided the learners with explicit explanations once the problem area was established.
The goal of this form of mediation was to reinforce the learners’ cultural or general
language knowledge related to grammar, vocabulary and phonology, depending on the source of the problem.

In Dan’s initial DA there is an example of R explicitly providing an explanation related to a grammatical error continuously repeated by Dan while recalling the ‘Meat’ passage from the DA1 text. Protocol 12 exemplifies R’s explanation of a grammar point.

Protocol 12

1. D. so this time he is saying... beaucoup de bœuf, beaucoup de *le boeuf, beaucoup de *la volaille ...très peu de porc... et jamais *du canard et jamais de…
2. dan. = jamais?
3. R. no-no-no... when you say beaucoup de... or trop de... or things like that [...]
4. D. = jamais?
5. R. yeah ... but one more thing... this is grammar... ok? ... it’s not about =
6. D. = jamais?
7. ... basically you don’t need to use articles here... you say... beaucoup de bœuf...
8. beaucoup de porc... beaucoup de volaille beaucoup de canard, beaucoup de lapin or très peu de...this kind of jamais de… you don’t use the article here… you say… très
9. peu de porc... jamais de lapin... this is a grammar point... we are not supposed to use articles here ... we cannot say beaucoup du beuf or du porc... or de la volaille
10. we have to say de ... we have to drop the article...
11. D. ok

Dan’s recall in lines 1-3 reveals his incorrect use of a grammar point concerning the omission of the article after the adverbs of quantity, e.g. beaucoup de, trop de, peu de etc. In line 4 R signals the learner that there is a grammatical feature that needs to be discussed (line 6). After that R focuses Dan’s attention on the problem by supplying him with necessary explanations regarding this particular linguistic feature (lines 7-12), since Dan’s apparent lack of knowledge in this case emerged through the mediated dialoguing that occurred earlier in this session.
7.4 Improper mediation

Similar to Poehner’s (2005) study, the present investigation also contained instances of excessive mediation or a mediation that was not sufficiently sensitive to the learner’s ZPD. From the perspective of SCT, inappropriate mediation can undermine learners’ opportunities to develop abilities that may be ripening (e.g. Lantolf and Thorne, 2006). Protocol 13, taken from Michel’s TA3-MP, exemplifies an interaction in which R provided a maladroit mediation, which in fact deprived the learner of a chance to complete the task on his own. The mediator-learner interactions in Protocol 13 focus on the following extract from the TA3 text:

Extract 6 (from the TA3 text):
The speaker said:
… en France le tabagisme passif est responsable d’environ de cinq mille décès par an…

... in France second-hand smoking is responsible on average for almost five thousand deaths per year…

Protocol 13

1. R. so le tabagisme est responsable ... de quoi ?
Listening
2. M. décès par an
3. R. ok ... décès par an... how many? (R writes décès par an for M)
4. M. one thousand... one hundred thousand...
5. R.... so... how many décès?
Listening
6. M. cent mille (rising intonation, not sure)
7. R. ok... cent mille... but...uh... say it again
8. M. I thought it was one hundred thousand
9. R. ... cinq mille... cinq mille =
10. M. = oh! ... cinq!... five thousand... (rising intonation)
11. R.uhu...
12. M. I thought it was *cent*...

Since Michel is unable to recall the second part of the segment in question, R decides to resort to the ‘Listening to detail’ strategy: she directs his attention to the fragment that occurs after the word ‘*responsable*’ (line 1). After an additional replay of the segment, Michel produces a correct utterance (line 2) which was already elicited earlier in the session. However, his recall of this IU still misses the cardinal numeral related to *décès* (deaths) and R immediately asks him a question about the number of deaths related to second-hand smoking (line 3). Michel’s incorrect response in line 4 suggests to R that he requires more detailed listening. This time, she focuses his attention on the number and replays the segment.

After the second listening, Michel still hears *cinq* as *cent* (line 6) which indicates that he needs more explicit mediation because it is doubtful that he does not know the French cardinal numbers. But rather than offering him another, less implicit, form of mediation, in line 9 R simply tells him the correct pattern, i.e. *cinq mille* (five thousand).

Michel’s incorrect hearing of *cinq* as *cent* might be explained by the confusion of the nasal sounds [ã] and [ɛ]. This, in itself, is not surprising because even more advanced L2 learners of French tend to confuse nasal sounds in oral texts (e.g. Delattre, 1951; Léon, 1976; Abry & Chalaron, 1994). However, had R attempted to use another move (e.g. ‘*Focused Listening*’ or ‘*Offering a Choice*’: *cinq mille* or *cent mille*) and then asked Michel to re-listen to the segment, she would certainly not have missed the opportunity to assist the development of his phonological ability.

The example given in Protocol 13 might be considered as an example of excessive mediation. Interestingly, this episode occurred at the end of the session, when
perhaps R’s attention to controlling her mediation began to weaken. Be that as it may, it could be argued here that mediating learners’ performance in the ZPD is not an easy matter and requires the mediator to be constantly attentive to clues emanating from learners as to the specific nature of their problems and ripening capacities. Effective mediation can be affected by many factors, such as mediators’ inexperience, length of sessions, effort required, and relatedly fatigue. As the following section will demonstrate, mediated sessions are labor intensive not only for mediators but also for learners.

**7.5 Learners’ responsive moves in the ZPD: insights into listening development**

This section presents a qualitative microgenetic analysis of the learners’ moves that occurred in response to mediation during the DA-MP and TA-MP sessions. The identified learners’ responsive moves can be further grouped into two interrelated categories. The first category is comprised of moves that reflect particularities of listening development within the ZPD (7.5.1). The second category contains moves associated with the effects of DA-based instruction observed during the assessments (7.5.2).

With regard to the first category, the analysis suggests that, while working in the ZPD, the learners tended to produce various contrastive responsive moves. These seemingly contrastive moves can be explained by the fact that the ZPD, by definition, consists of maturing and, therefore, unstable functions. The instability of maturing listening ability is examined here through the notion of progression and regression. The rationale for this examination is in line with the SCT genetic approach which reflects Vygotsky’s double-sided view of development as an evolutionary as well as
revolutionary process. For Vygotsky, development involves both progressive and regressive moves, and even if a move is regressive, it still can contribute to general movement forward (Vygotsky 1978; 1997a). In other words, development is a process that is always pushing individuals forward even if at times it needs to step backward (Lantolf, personal communication, spring 2009). Thus, both progression and regression are viewed here as two legitimate sides of the L2 developmental coin within the ZPD.

Figure 7-5 summarizes the inventory of learners’ regressive and progressive responsive moves related to the development of L2 listening ability; the moves were identified on the basis of analysis of mediator-learner DA-based interactions.

<table>
<thead>
<tr>
<th>Regressive Moves</th>
<th>Progressive Moves</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unresponsive</td>
<td>1. Responsive</td>
</tr>
<tr>
<td>2. Provides negative response</td>
<td>2. Provides positive response</td>
</tr>
<tr>
<td>4. Does not decipher a pattern or a word</td>
<td>4. Decipher a pattern or a word correctly</td>
</tr>
<tr>
<td>5. Does not overcome problem</td>
<td>5. Overcomes problem</td>
</tr>
</tbody>
</table>

Figure 7-5: Learner regressive and progressive responsive moves within the ZPD.

In relation to the second category, the analysis of interactions also revealed the learners’ responsive moves that reflect the effects of DA-based instruction and that were used by the mediator to promote further L2 listening development. As discussed in chapters 3 and 4, DA is a framework where assessment and instruction are integrated into a unified activity anchored in mediated dialoguing between learners and mediator. That
is, learners’ participation in this type of dialogue encourages them to ask questions and to seek the mediators’ assistance or feedback whenever learners encounter a problem while performing the assessment task. Thus, Figure 7-6 highlights the identified responsive moves that mirror learners’ self-initiated efforts to seek mediation in order to improve their listening performance.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Requests a replay</td>
<td></td>
</tr>
<tr>
<td>2. Uses mediator as an evaluator</td>
<td></td>
</tr>
<tr>
<td>3. Uses mediator as a resource</td>
<td></td>
</tr>
<tr>
<td>4. Imitates mediator</td>
<td></td>
</tr>
<tr>
<td>5. Incorporates feedback</td>
<td></td>
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<tr>
<td>6. Accepts mediator’s assistance</td>
<td></td>
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<tr>
<td>7. Rejects mediator’s assistance (very rare occurrence)</td>
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</tbody>
</table>

Figure 7-6: Learner responsive moves related to the effects of DA-based instruction within the Zone of Proximal Development.

Following Aljaafreh and Lantolf’s (1994) approach used to determine the microgenetic growth of learners’ L2 writing development in the ZPD, the present study outlined five developmental levels of responsive moves that the learners produced while transiting through various locations in their ZPDs. That is, learners’ responsive moves that necessitated only implicit forms of mediation for task completion are regarded here to be high in their ZPD and, therefore, the learner is close or very close to independent performance. Learners’ responsive moves for which explicit mediation was needed to produce acceptable IUs are considered to be at the early stages of ripening in the ZPD.
and the learners are not yet sufficiently able to control the listening task by themselves.

The resulting transitional levels of listening development, presented in Figure 7-7, were established on the basis of the learners’ emerging ability to control the listening task in which they were engaged. Figure 7-7 also provides examples of possible learners’ responsive moves and possible mediational moves associated with the outlined developmental levels.
<table>
<thead>
<tr>
<th>Transitional levels of listening development</th>
<th>Examples of learners’ responsive moves observed</th>
<th>Examples of mediator’s strategies observed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1.</strong> The learner is not able to perform the listening task even with explicit forms of mediation</td>
<td>Unresponsive; Provides negative response; Makes a wrong choice; Does not Overcome problem; Does not Decipher a pattern or a word; Accepts mediator’s assistance</td>
<td>Offers a Choice; Provides translation; Provides a Correct Pattern; Provides an Explicit Explanation</td>
</tr>
<tr>
<td><strong>Level 2.</strong> The learner is able to perform the listening task but only with explicit forms of mediation</td>
<td>Responsive; Makes a right choice; Overcomes problem; Decipher a pattern correctly without meaning; Requests a replay; Accepts mediator’s assistance</td>
<td>Replay of a passage, of a segment, of a detail; Offers metalinguistic clues; Offers a choice; Translation; Provides a correct pattern; Provides an explicit explanation</td>
</tr>
<tr>
<td><strong>Level 3.</strong> The learner performs the listening task with implicit forms of mediation but may need the mediator’s help to evaluate the correctness of IUs recalled.</td>
<td>Overcomes problem; Decipher a pattern correctly without meaning or assigns it appropriate meaning; Requests a replay; Accepts mediator’s assistance</td>
<td>Structures the text; Replay of a passage, of a segment; Asking the Words; Identifying a problem area</td>
</tr>
<tr>
<td><strong>Level 4.</strong> The learner performs the listening task with minimal implicit forms of mediation and recalls acceptable IUs without mediator’s evaluation</td>
<td>Requests a replay; Decipher a pattern correctly and assigns it appropriate meaning; Rejects mediator’s assistance</td>
<td>Accepts response; Structures the text; Replay of a passage; Asking the Words</td>
</tr>
<tr>
<td><strong>Level 5.</strong> The learner is able to recall several acceptable IUs during independent performance</td>
<td>Decipher a pattern correctly and assigns it appropriate meaning independently</td>
<td>None</td>
</tr>
</tbody>
</table>

Figure 7-7: Transitional levels of learners’ listening development within the ZPD.
The next subsection (7.5.1) focuses on the responsive moves related to listening development that were exhibited by the learners as they moved through the ZPD toward control over the listening tasks. Learners’ moves, occurred in response to DA-based instruction, are discussed in subsection 7.5.2.

7.5.1 Learners’ responsive moves: microgenesis of listening ability

7.5.1.1 Responsive vs. Unresponsive

In the context of the present study, the Responsive move is understood as the learners’ attempt to respond and to generate any kind of response, acceptable or unacceptable, to mediation intended to improve their text comprehension. The Unresponsive move is seen as the learners’ inability to provide any correct or incorrect response to mediation, by remaining silent. It should be noted that there might be many reasons behind the learners’ option for not responding at all to mediational moves. Poehner (2005) observed exactly the same phenomenon in his study. He noted that “without subsequent verbalization or attempt to identify or overcome an error, any immediate effect of the mediator’s move cannot be known” (p.183). Thus, on the basis of lack of response it is impossible to tell whether the intention of a mediational move remained obscure to the learner; or the learner’s silence is due to an unknown linguistic or cultural point that impeded his/her text comprehension; or, as shown in Protocol 14, the learner’s answer could be affected by memory difficulties. The excerpt, taken from Dan’s TA3-MP session, illustrates the mediator-learner interactions based on the discussion of the following segment from the TA3 text:
Extract 7 (from the TA3 text):

The speaker said:

... « fumeur-non-fumeur ? », dès l’an prochain cette question rituelle pourrait bien disparaître de tous les lieux publics ...

... “smoker or non smoker?”... beginning next year this ritual question could disappear from all public places ...

Earlier in the session Dan recalled the above segment as follows: “ok… he is saying… the question ‘smoking/non-smoking?’ is going to disappear from public places.” Since he failed to recognize pourrait (could), the present conditional form of the verb pouvoir, in his independent recall of the TA3 text and continued to do so during his TA3-MP, R decided to focus Dan’s attention on this grammar point in order to improve his text comprehension.

Protocol 14

Listening

1. R. what he says before disparaître? Basically you understand the whole idea
2. it’s just the struggle for ...
3. D. it’s something like *vrai...
4. R. how would you say ‘could disappear’? ... could disappear... (med. strategy: translation)
5. D. silence (Unresponsive)
6. R. this question could disappear... next year this question could disappear...
7. D. silence... (Unresponsive)
8. R. could... could... could...
9. D. salience... (Unresponsive)
10. R. ... how to say ‘can’ in French? Can...
11. D. (pause)... oh... pouvoir... (D. begins to respond to meditiona - Responsive)
12. R. pouvoir... exactly! ... now using conditional... how would you say could disappear? (Mediational strategy: Metalinguistic clue)
13. D. silence... (Unresponsive)
14. R. cette question... this question… (rising intonation)
15. D. conditional … uh… pourrait ?
16. R. pourrait… (affirmatively)
17. D. pourrait disparaître…
Protocol 14 exemplifies Dan’s struggle to recognize the conditional form and provides an illustration of a learners’ unresponsive and responsive moves that occurred in the same small episode of the session. In line 1, R invites him to re-think his recall and reveals Dan’s inability to hear correctly the verb form in question (line 2). R begins her help with a fairly explicit mediational strategy (Translation) in line 4 but it does not generate any response from Dan, he remains silent (line 7) until she switches to another more explicit hint in line 10. This time, after a pause, Dan produces a responsive move by providing a correct answer (line 11). Then, R offers him assistance in the form of a Metalinguistic Clue which again results in Dan’s unresponsiveness (line 13). He remains silent for a while and finally responds correctly but seeks R’s evaluation in order to confirm the appropriateness of his response, indicated by the question intonation of his utterance in line (15). To encourage Dan, R accepts his response and confirms the correctness of the conditional form (line 16) produced by Dan in line 15. In response to this mediation, Dan finally generates a correct pattern from the segment (line 17). In line 23, Dan displays his correct understanding of the segment in question, which cropped up as a result of what he produced in line 17 and mediational strategies used by R.
7.5.1.2 Negative response vs. Positive response

This move was observed in situations when the learners were able to provide any kind of response immediately. Contrary to the Responsive/Unresponsive move, negative or positive responses suggest that the learners were cooperatively engaged in the task and understood the meditation. Generally, these moves occurred after an incorrect recall of a passage or a segment and were generated by R’s additional leading questions aimed at enhancing the learners’ text comprehension. Protocol 15 offers an episode from Michel’s DA1-MP session in which he subsequently provided both negative and positive responses. The episode is grounded in the mediator-learner discussion of the following passage from the DA1 text:

Extract 8 (from the DA1 text):

The speaker said:
.. et les légumes sont très manque de goût... sont très ...on a l’impression de...euh... de manger de l’eau... ça a pas forcement de goût...

... and vegetables don’t have any taste... they are... I have the impression that...uh ... I’m eating water... they don’t have any taste.

Protocol 15

Listening

1. M. I heard le goût…
2. R. Did you hear the word l’eau?
3. M. no...
4. R. Qu’est ce que c’est l’eau ?
5. M. I don’t know (mumbling)
6. R. and... j’aime bien l’eau minérale =
7. M. = oh!!! ... water? (not sure)
8. R. uhu… ok… that’s what he is saying…
In Protocol 15, the learner displays evidence of appropriation of the mediator’s help based on R’s assumption that Michel knows the lexical item in question, i.e. *l’eau* (water), but needs more explicit mediation to recognize it. In this protocol, R uses three mediational moves: she provides a correct pattern (line 2) and receives a negative response from Michel (line 3), then she offers a choice (in lines 4 and 6) which triggers Michel’s correct response (line 7) but his hesitation prompts R to overtly accept the learner’s response (line 8) in order to encourage him before continuing further discussion of the segment in question.

7.5.1.3 Correct choice vs. Incorrect choice

These responsive moves occurred in situations when the learners could or could not appropriately respond to R’s mediational move *Offering a Choice*, which invited them to choose between two options. The excerpt, taken from Lora’s first DA session, is an illustration of the learner failing to make an appropriate choice while recalling the following excerpt from the DA1 text.

**Extract 9 (from the DA1 text):**

The speaker said:

... *d’habitude ce que je mange ici... c’est les pizzas, hamburgers...les desserts...*  
... what I usually eat here [in the US] ... it’s pizzas, hamburgers... desserts...

**Protocol 16**

1. L. he says that by habit we eat a lot of pizza, hamburgers and desserts...  
2. R. now ... try to understand who eats these things... he or Americans? =  
3. L. silence

**Listening**
4. L. Americans...

In line 1 Lora produces a partially correct recall of the segment. R offers her a choice so that Lora can improve her recall with minimal assistance. R waits for her to see if the learner is able to use her prompt appropriately. Because the learner remains unresponsive, R replays the segment, but Lora’s incorrect response in line 4 suggests that she requires more explicit mediation.

In some cases, this category of moves resulted in the learners’ correct responses to R’s mediation in the form of choice offering. Protocol 17 illustrates an interaction in which the learner makes a correct choice. The mediator-learner interaction in Protocol 17 is based on the discussion of the segment presented in Extract 9 from the DA1 text.

Protocol 17

1. M. habitually they eat more... uh...=
2. R. = he or they?
3. M. ... he said he did... he said most of the time
4. I eat a lot of pizza, burgers and deserts...

In this episode, taken from Mona’s DA-1 MP, the learner initially produces an incorrect recall of the segment (line 1). Mona’s recall in line 1 repeats her independent recall in which she recalled this segment as follows: “Americans eat a lot of fast food… he said burgers and … uh… pizza.” In line 2 R interrupts her by offering a choice to make sure that this time she has understood appropriately the agent in the segment, i.e. ‘who eats hamburgers’. In the next line, Mona displays her correct understanding of the segment by switching from ‘they’ to ‘he’ and in so doing, she confirms that she heard the
speaker making reference to himself (line 4). In fact, Mona’s response in line 4 displays her appropriate understanding of the segment.

7.5.1.4 Not deciphering a pattern correctly vs. Deciphering a pattern correctly

These types of learner’s moves were reserved for those instances when mediation led to a correct or incorrect hearing of a pattern from a text. An especially important responsive move with respect to listening development was when learners provided evidence to decipher correctly chunks in speech, even if in some cases it happened without their ability to assign meaning to a chunk. Protocol 18, taken from Erica’s DA1-MP, exemplifies learners’ inability to decipher any word and, therefore, the inability to control the listening task. In contrast, Protocol 19 from Dan’s TA3-MP provides evidence of learners’ ability to hear correctly chunks from the text, illustrating their movement towards control over the target segment of a text. The mediator-learner interactions presented in protocol 18 are anchored in the following excerpt from the DA1 text. The speaker said:

Extract 10 (from the DA1 text):
... j’ai remarqué que les petits déjeuners étaient très riches donc sucrés-salés alors qu’en France ça serait plutôt sucré... 

... I noticed that breakfasts are rich here, sweet and salty, while in France it [breakfast] would be mainly sweet...

Protocol 18

1. E. I mean... the first like.... I can’t really understand ... like the first you know
2. five or six words that come out of his mouth...it’s just like bluu-u-urr....
3. it just seems like bluu-u-u-r...
4.  R.... ok... but ... do you hear les petits déjeuners?
5.  E. yeah... I do hear that and... I thought I heard manger and un peu...
6.  it sounds like that...

Interestingly, during her DA1-IP, Erica produced a more detailed recall of the segment in question. She said: “I… I definitely picked out a few words … he was talking about breakfast and … I heard him talking about sweetness as opposed to saltiness”. In lines 1 and 2, however, Erica overtly comments on her inability to understand this segment after an additional replay during her DA1-MP session. R’s clarification question in line 4 reveals that this time she was able to pick out correctly at least one expression, i.e. les petits déjeuners (breakfasts), since two other lexical items mentioned by Erica, i.e. manger (to eat) and un peu (a little bit), do not appear in the segment (line 5). At a later point in the same session Erica experienced difficulties with recognition of a number of words from this segment (e.g. j’ai remarque, étaient très riches and ça serait plutôt ) due to the particularities of the speaker’s pronunciation.

Unlike the episode from Erica’s DA1-MP, Protocol 19 presents an example, taken from Dan’s TA3-MP, in which the learner shows signs of his ability to function independently. During this interaction the learner was asked to recall the following segment from the TA3 text based on a TV news report on smoking regulations in French restaurants.

**Extract 11 (from the TA3 text):**

The speaker said:

*Dans cette brasserie marseillaise, très fréquentée à l’heure du déjeuner, les non-fumeurs sont largement majoritaires et tous se félicitent, bien sûr, de cette nouvelle législation.*
In this brasserie of Marseille which is very popular during lunch time the majority of clients are non-smokers and they congratulate themselves, of course, on this new law.

**Protocol 19**

1. D. *tous se félicitent…* (rising intonation)
2. R. yeah! ... you said this!
3. D. I said this but I don’t know what it means...

In line 1, Dan correctly produces a pattern from the segment and receives R’s approval regarding the correctness of his recall (line 2). In the next line, Dan points out that even though he did hear the pattern, he is unable to assign it any meaning and, therefore, he needs more explicit mediation to achieve an appropriate understanding of the segment.

It is important to note here, that the learners’ ability to correctly pick out items even without meaning is seen as an important sign of listening development. That is, moving from ‘a blur’ toward correctly heard patterns in listening may be similar to using memorized chunks in speech and then analyzing them into re-combinable units (Lantolf: personal communication, spring 2009).

The microgenetic analysis also yielded insightful instances in which the learners were able not only to correctly decipher a pattern but also to assign it appropriate meaning. These instances revealing learners’ concrete listening developmental path are discussed in the next sub-section.
7.5.1.5 Overcoming problem vs. Not overcoming problem

There were instances in which the learners could understand a passage or a segment of a text with minimal assistance from R. Protocol 20 provides an example of a learner overcoming a problem after the provision of an implicit move by the mediator. The protocol is taken from Fée’s DA2-MP and captures the point in the session when Fée tries to understand the following segment from the DA2 text.

Extract 12 (from the DA2 text):

The speaker said:

… et je comprends parce que ... je veux dire ... les serveurs et puis j'ai travaillé dans un restaurant ici [aux US]... je comprends... enfin... ils se font payer rien du tout et puis leur paie vient du pourboire...

... and I understand because… I wanna say... waiters and I worked at a restaurant here [in the US]... I understand... well... they are paid next to nothing and their payment comes from tips...

Protocol 20

Listening

1. F. I don’t know what she says ... it sounds like rien du tout or something...
2. R. ok... that’s why ... let’s listen... (laughter)
3. F. ok (laughter)

Listening

4. R. did you hear it?
5. F. rien du tout? (not sure of what she is saying)
6. R. ok… rien du tout...
7. F. oh! ...so they are not paid at all...
8. R. yeah!.. voilà!

In line 1 Fée correctly deciphers a phonological pattern from the segment without attributing any meaning to it. Then R invites her to listen to the segment once more (line
2). This minimal prompting was sufficient to trigger Fée’s comprehension and in line 7 she overcomes the problem on her own by translating correctly *rien du tout* (next to nothing). It is clear that Fée understood the meaning of the expression on the basis of her previously acquired linguistic knowledge. That is, the ability to understand this particular segment is high in Fée’s ZPD, and the learner is very close to being able to control this listening task by herself. In the latter case, presented in Protocol 21, the learner displays her inability to comprehend a previously acquired lexical item even with R’s fairly explicit help. Protocol 21 is based on the discussion of the following segment from the TA3 text.

**Extract 13 (from the TA3 text):**

The speaker said:

... *en France le tabagisme passif est responsable d’environ de cinq mille décès par an...*

... in France second-hand smoking is responsible on average for almost five thousands deaths per year....

**Protocol 21**

**Listening to the segment**

1. M. I... I... I still can’t hear it ...
2. R. so... but you hear ... *en France le tabagisme passive* and then (rising intonation)
3. M. I just can’t hear the first letter... something like *sponsible* [...] 
4. R. and if I say *le tabagisme passif est responsable*… does it make sense?
5. ... *responsible*?
6. M. no (laughter)... it doesn’t make sense!
7. R. ... it doesn’t make sense... the thing is that... the word that you hear now like *sponsible* ... uh.. we have it in English...
8. M. uh... uh... no... I can’t...
In this episode from Mona’s TA3-MP, she struggles to understand the adjective *responsible* (responsible) after two unsuccessful listenings to the same segment, which occurred earlier in the MP-session. During the listenings she was directed to listen to this particular lexical item but as Protocol 21 demonstrates, after the third listening she is still unable to understand *responsable* (lines 1 and 3). Then, Mona receives the most explicit hint, i.e. *Providing a Correct Pattern*. In fact, R repeats this word twice for her (lines 4 and 5) but still Mona is not able to overcome the problem, i.e. to recognize the adjective on her own, even though she had been explicitly prompted to do so.

It cannot be known for certain what exactly impeded Mona’s recognition of the word that she obviously knows since French and English, her L1, both have the same cognate with exactly the same meaning. Her inability to recognize this particular adjective might be related to some psychological issues (e.g. memory effects) which are beyond the scope of this dissertation. Nevertheless, this type of inability to remember well known lexical items or grammar points at the right moment was observed in all study sessions and was a major source of comprehension difficulties experienced by all learners. The source of this problem might also stem from the distinction between spoken and written French and the marked distinction in pronunciation of the cognates in English and French.

### 7.5.2 Learners’ responsive moves due to the effects of DA-based listening instruction

As indicated in chapter 5, before each of the assessments the learners were encouraged to ask the mediator for assistance when they felt it necessary. In accordance with DA principles, they were directed to pose questions so that the mediator could offer
explanations and suggestions related to text comprehension. The microgenetic data analysis shows that the effects of these DA-based directions manifested themselves in the learners’ responsive moves presented below.

7.5.2.1 Requesting a replay

There were many instances in which the learners overtly expressed their need for re-listening to a passage or a segment in order to enhance their text comprehension in general or to clarify certain details of a passage or a segment. Requesting a replay revealed itself in a number of ways. In some cases, the learners formulated their requests in the form of questions (see Protocol 22) and in others they openly stated that they needed to listen to the text again (see Protocol 23).

Protocol 22

1. R. and then he says bagel it’s kind of strange thing right? for breakfasts he means... because it’s ... in his opinion it’s... what?... is it sweet or is it salty?
2. C. ... uh ... can we play it again so that I can listen?
3. R. yes...
4. C. right now I think he said it’s not sugary but let’s listen...

This episode, taken from Chris’s DA1-MP, begins with R’s relatively explicit form of mediation, i.e. offering a choice (line 2). This mediational move, however, generates Chris’s request for replay, which indicates that he is not fully confident and cannot provide any answer at this point. In line 5 he provides a more detailed explanation concerning his request and confirms the need for re-listening to the segment.
Protocol 23 from Dan’s DA2-MP presents one of the instances in which the learner overtly initiates re-listening to a passage and expresses his need for an additional listening. The protocol mirrors the discussion of the following extract from the DA2 text.

**Extract 14 (from the DA2 text):**

The speaker said:
... ici c’est ... euh... c’est ‘finissez’ ... c’est vraiment on a l’impression que ... bon il faut finir ... dès qu’on a fini bon il faut partir ‘laissez plus de gens venir’ ... et je comprends parce que ... je veux dire les serveurs et puis j’ai travaillé dans un restaurant ici [aux États-Unis] ... je comprends enfin...

... here it’s uh... it’s about “finish”… you really have the impression that ... well… you have to finish ... as soon as you are done with your dish well you have to leave... ‘allow more people to come’… and I understand because... I wanna say... waiters and then I worked at a restaurant here [in the US]... I understand them [waiters]...

**Protocol 23**

1. D. … you know they want you to come in, eat your food, pay and leave
2. and she says she understands because she worked… at a restaurant also…
3. R. where?
4. D. en France … uh …did she? ... or… that part I didn’t know ...
5. I have to listen to it again but she says that she understands because
6. she worked or she works at a restaurant...

In lines 1 and 2, Dan produces a quite acceptable recall of IUs from the passage. However, his response (line 4) to R’s question (line 3) reveals that he has a partial understanding of the passage. Apparently R’s question encourages him to reflect on his recall and in line 5 he initiates his request for a replay.
7.5.2.2 Using mediator as an evaluator

This responsive move mainly occurred when the learners were able to decipher correctly a chunk or a word from a passage but were not certain if they heard it correctly. In these cases, the learners had to appeal to R’s assistance in order to evaluate the correctness of what they heard. The interaction below, which took place during Erica’s DA2-MP, displays the learner’s search for the mediator’s help to evaluate her understanding of a lexical item. These interactions presented in Protocol 24 involve the discussion of a segment from the DA2 text that describes the tipping system in French restaurants.

**Extract 15 (from the DA2 text):**

The speaker said:

… parce que... en France le pourboire est inclus...

… because … in France the tip is included...

**Protocol 24**

1. E. *incu? what she is saying? it’s like *incu? ... ‘cause I know. something
2. like gratuit or service compris... or something like that...
3. R. ... how do you hear this word?... and... uh... how to say ‘tip’ in French?
4. E. pourboire
5. R. ... ok *pourboire... you know this word =
6. E. = yeah =
7. R. = and here she says le pourboire est (rising intonation)

**Listening to the same segment**

8. E. * incu ? sounds like inclus... is it included? [not sure]
9. R. yes!!! ... she says inclus basically... she eats this [I] a little bit ...
10. ... but you understand it [...] ... because you said ‘included’...
In this excerpt Erica struggles to grasp the meaning of the word *inclus* (included) that she does not hear correctly (line 1). First, R checks (line 3) if Erica knows the meaning of the word *le pourboire* (tip) and then replays the segment for her. This sets Erica on the right path, and her responsive move in line 8 suggests that R’s mediation triggered her comprehension. However, Erica’s rising intonation exhibits her uncertainty, which compels her to seek R’s evaluation. As a result, R immediately accepts her response (line 9) and provides an explanation with respect to the lexical form and translation that Erica produced.

### 7.5.2.3 Mediator as a resource

The microgenetic analysis of MP-sessions shows, that besides using the mediator as an evaluator, learners also sometimes used the mediator as a resource. The reason for this responsive move can be attributed to the instability of L2 knowledge often exhibited by learners at the intermediate level. Consider the following episode from DA1-MP in which Michel requests R to provide more explanations concerning a feature of spoken French that R introduced earlier in the same session. The interactions involved the discussion of the following segment from the DA1 text.

**Extract 16 (from the DA1 text):**

The speaker said:

... *ça a pas forcément de goût* [*ça = les légumes*] ...

... it doesn’t really have a taste [*it=vegetables*] ...

**Protocol 25**
1. R. did you hear it? ça a pas? it doesn’t have... ça a pas forcement de goût...
2. M. I forgot what you told me... they drop the ne... (rising intonation)
3. R. yes... they drop the ne... all the time...
4. M. … ça a pas ?
5. R. … ça a pas … it’s not … ça n’a pas … it’s … ça a pas … he says…ça a pas
6. forcement de goût… basically this is sort of classic French … ça n’a pas
7. but they drop this ne all the time in spoken French…
8. M. they do it all the time? =
9. R. = yes... I mean in spoken French... when they speak... not when they write...
10. ... when they write they tend to use this ne though...

In line 2 Michel admits that he does not remember well the explanation concerning ne dropping in spoken French. R repeats her explanations in lines 3, 5-7 and 9-10, but this time she uses ça a pas as an example to illustrate this feature of spoken French.

7.5.2.4 Imitating mediator

This responsive move occurred in situations when the learners attempted to repeat correctly oral forms of previously unknown expressions or isolated words mainly after R’s moves in which she provided the learners with a correct pattern. From the perspective of SCT, imitation is considered a process that has an important effect on development (Vygotsky, 1978). Imitation is not seen as “a mindless copying activity, but an intentional, complex, and potentially transformative process” (Lantolf & Thorne, 2006: 176). In other words, the learners’ ability to imitate consciously allows them to internalize mediator-learner interactions and to develop beyond their current abilities. Protocol 26, taken from Dan’s DA1-MP, displays an example of a learner’s imitation facilitated through mediation.
Protocol 26

1. R. so...when it’s about chicken and turkey...
2. D. ... poultry
3. R. ok poultry... do you know the word poultry?
4. D. is it *volan? ... uhm... I don’t know the word...
5. R. it’s *la volaille (R writes this word for Dan)
6. D. aaa-ah... *la volaille
7. R. *la volaille means poultry...
8. D. ok… *la vo-laille… (slowly repeats the word after R)

Protocol 26 captures an instance in Dan’s DA1-MP when he encounters an unknown L2 lexical item and makes an attempt to imitate it. First, R asks if the learner is familiar with the word (in line 3) since it is necessary for text comprehension. Importantly, Dan already displays an attempt to imitate this word but fails to do it correctly and overtly states that he does not know it (line 4). R then provides the learner with explicit help: she casts the word in its correct form and writes it down (line 5). At this point, Dan begins to imitate it correctly (line 6) and ends up by carefully imitating R’s pronunciation (line 8).

7.5.2.5 Incorporating feedback

This responsive move was observed in those instances when the learners were able to use correctly L2 knowledge related to lexis, grammar or phonology discussed in the MP-based sessions. Generally, this knowledge was provided by R in response to the learners’ incorrect use of a new or a previously acquired L2 item. Protocol 27 below demonstrates how feedback was provided and negotiated in the ZPD.

Protocol 27
In Protocol 27, taken from Chris’s DA1-MP, learner-mediator interactions are focused on the phonological feature of the word *porc*. When asked if he knows how to pronounce pork in French (line 2), Chris does not offer any response (line 3) and R provides him a brief phonological explanation concerning its pronunciation in French. Apparently, this exchange resulted in the learner appropriately incorporating feedback since a short time later in the same session Chris correctly pronounces this word (line 9).

**7.5.2.6 Accepting mediator’s assistance**

With regard to learners’ moves during the mediated portions of assessments, there were more instances of learners accepting (not rejecting) the mediator’s assistance than rejecting it. It should be pointed out here that in general the learners relied heavily on the mediator’s help and whenever R offered it, they readily accepted it, especially with regard to text replays. Protocol 28, taken from Erica’s DA1-MP, exemplifies this kind of help-accepting move. In this episode, the mediator-learner interactions involve discussion of the expression *café dilué* (diluted coffee) embedded in the DA1 text.
Protocol 28

1. E. ... this word doesn’t sound familiar
2. R. doesn’t sound familiar (rising intonation)
3. E. no...
4. R. ... and if I say *dilué*? ... *café dilué*... (explicit hint)
5. E. diluted!
6. R. exactly...exactly...
7. E. ...’cause I think he was saying like ... very concentrated...small amount...
8. R. yeah... it’s in France... as opposed to these big... *grands cafés*
9. E. = *dilui*
10. R. = *dilué*... *dilué*... would you like to listen again?
11. E. oh yeah... I would...

In fact, Protocol 28 contains various moves exchanged by the learner and the mediator: in line 3 Erica provides a negative response to R’s comprehension check. In line 4, on the basis of Erica’s answer, R provides her with the correct pattern, which triggers the learner’s comprehension. Finally, R invites Erica to listen to this segment again (line 10) so that she hears on her own how the speaker pronounces all the words discussed in this short episode, and, as seen in line 11, the learner willingly accepts this mediator’s move.

Apparently, the numerous instances of acceptance of assistance might be attributed to the fact that the present study is focused on intermediate L2 learners, whose ability to understand authentic spoken French is not yet fully matured but nevertheless lies in their ZPD. Be that as it may, even though the learners tended to rely heavily on R’s assistance throughout all sessions, the analysis revealed two rejections of assistance. An example that provides evidence of rejection of mediation is described in the next section.
7.5.2.7 Rejecting mediation

The first rejection of mediation was observed in Fée’s TA1-MP and the second appeared in Lora’s TA3-MP. The episode taken from Fée’s data is exemplified in Protocol 29 where R and the learner discuss the meaning of the French word *une entrée* (an appetizer). Prior to the discussion presented in Protocol 29, Fée confused the meaning of this French and English cognate, which has different meanings in these two languages (*an appetizer* in French and *main dish* in English).

**Protocol 29**

1. R. ... how would you say appetizer in French?
2. F. ... *entrée*? I don’t know...
3. R. so ... I think it makes sense... *entrée* =
4. F. = yeah... yeah... that’s fine... but I mean... in English it doesn’t translate...
5. R. it doesn’t... but *entrée* means an appetizer, any kind of appetizer... but
6. ... this is the thing with which you start your meal =
7. F. = yeah... that make sense =
8. R. = and this is the way how they [French] eat... so now do you need to listen
9. to this part again?
10. F. no I don’t think so...
11. R. you understand (rising intonation) =
12. F. = yeah...

In lines 8 and 9, R proposes to replay the passage containing the word *entrée* so that Fée can go over the passage one more time and re-listen to the use of this lexical item. Fée, however, rejects R’s proposal (line 10), arguing that she understands the passage and, therefore, does not need an additional listening (line 12). Apparently, R’s explanation provided in lines 4-6 is sufficient for Fée to understand the passage in question.
7.6 Frequency of mediator’s strategies and learners’ responsive moves in the ZPD

From the perspective of SCT, the counts of frequency allow tracking the microgenesis of a specific process which is reflected in the construction of the ZPD jointly performed by the mediator and the learner (Aljaafreh & Lantolf, 1994; Poehner 2005). Following Aljaafreh and Lantolf’s (1994) suggestions, the present section focuses on the frequency of strategies and responsive moves produced by the mediator and the learners while dialogically working in the ZPD.

To track developmental changes of L2 listening ability over time, the section introduces Tables 7-1 and 7-2, given below. The Tables microgenetically capture the frequency of mediational strategies and responsive moves at three specific stages of DA-based interventions, i.e. DA1, DA2, and TA3. With regard to stages, three indicated sessions that involved mediator-learner interactions were deliberately coded and analyzed for the frequency of mediator’s strategies and learners’ moves. Comparisons of the selected sessions display the microgenetic growth of the learners’ ZPD and developmental changes that occurred at three different points in time during the study. As for the specifics of listening activities performed by the learners, it should be kept in mind that the count of strategies and moves in the Tables reflects also the learners’ ability to deal with the increasing complexity of aural texts. That is, it was noted earlier that the learners were asked to listen and recall a series of increasingly complex authentic French texts (see Chapter 5).

Table 7-1 summarizes the frequency and quality of strategies delivered by the mediator while assessing learners’ listening ability in the ZPD. The table provides counts of moves from DA1-MP, DA2-MP and TA3-MP for each of the learners.
As can be seen in Table 7-1, *Replay*, specifically *Replay of a Segment* or *Focused Replay*, was the most frequent strategy used by the mediator at time 1 (DA1-MP), at time 2 (DA2-MP) and at time 3 (TA3-MP). The analysis regarding the amounts of this mediational move at these three points in time indicates that at time 2 there were a decreased number of replays required by the learners to complete the listening task. However, while recalling the TA3 texts (i.e. far transfer task) the learners generally needed more replays as compared to the DA1 and DA2 texts. In fact, the decreasing and increasing number of replays confirms the results obtained through quantitative analysis by reflecting learners’ regressive and progressive movements, which, in turn, indicates the growth of learners’ listening ability.

Additionally, Table 7-1 displays positive changes in such mediational strategies as *Translation* and *Providing a correct pattern*. That is, it is assumed here that decrease in the need to translate and to provide correct pattern might also indicate progressive changes in the learners’ ZPD, leading to development.

With regard to total number of mediational strategies used at three different points in the study, Table 7-1 mirrors a significant decrease in their use at time 2 as compared to time 1 and a slight decrease at time 3 as compared to time 1. This tendency in strategies use may be explained by the varying complexity of the texts used in the study: the texts selected for DA1 and DA2 were identical in terms of format (video interview with one interviewee) but different in terms of topic, whereas the text selected for TA3 was different in a more substantial way, i.e. in genre (TV news report), in topic and in variety of speakers. Be it as it may, the frequency of total strategies used by the mediator, clearly
shows the learners’ movement towards self-regulation concerning their ability to understand authentic spoken French.

Table 7-2 presents the frequency of learners’ responsive moves made while completing listening task at three different times of the study, i.e. DA1-MP, DA2-MP and TA3-MP. The table is intended to show listening development of individual learners and focuses exclusively on the regressive and progressive moves that reflect the process of improvement in listening ability that occurred over the time of the study.

The move *Decipher a pattern correctly* is considered here to be an important indicator of listening development over time since it demonstrates the learners’ emerging ability to function independently without reliance on the mediator’s assistance. The slight increase in frequency of this move at time 3 (TA3) provide clear signs of learners’ improved ability to understand aural spoken French. That is, the counts of the *Decipher a pattern correctly* move suggest that even though the learners still required mediation and were not able to fully control the task, their ability to comprehend spoken texts was improving since at time 3 they were asked to recall a more complex text as compared to the texts at time 1 and 2 (see chapter 5 for texts description). In addition, the counts of the responsive move *Does not decipher a pattern* tended to decrease over time. This responsive move is the mirror image of *Decipher a pattern correctly* and its decrease is regarded here as an indication of development of listening ability.
Table 7-1: Mediator’s moves within the learners’ ZPD (during DA1-MP, DA2-MP and TA3-MP).

<table>
<thead>
<tr>
<th>Category</th>
<th>Chris DA1</th>
<th>DA2 TA3</th>
<th>Dan DA1</th>
<th>DA2 TA3</th>
<th>Erica DA1</th>
<th>DA2 TA3</th>
<th>Fée DA1</th>
<th>DA2 TA3</th>
<th>Lora DA1</th>
<th>DA2 A3</th>
<th>TA3</th>
<th>Michel DA1</th>
<th>DA2 TA3</th>
<th>Mona DA1</th>
<th>DA2 TA3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepting Response</td>
<td>24</td>
<td>10</td>
<td>19</td>
<td></td>
<td>22</td>
<td>12</td>
<td>23</td>
<td></td>
<td>18</td>
<td>12</td>
<td>16</td>
<td>27</td>
<td>9</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Replay</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replay of a passage</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td></td>
<td>8</td>
<td>3</td>
<td>5</td>
<td></td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Replay of a segm./focus.</td>
<td>25</td>
<td>19</td>
<td>31</td>
<td></td>
<td>23</td>
<td>9</td>
<td>38</td>
<td></td>
<td>29</td>
<td>15</td>
<td>26</td>
<td>30</td>
<td>11</td>
<td>52</td>
<td>35</td>
</tr>
<tr>
<td>Structuring the text</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Asking the words</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Identifying problem area</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td></td>
<td>2</td>
<td>3</td>
<td>5</td>
<td></td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>9</td>
<td>1</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Metalinguistic Clues</td>
<td>9</td>
<td>0</td>
<td>2</td>
<td></td>
<td>5</td>
<td>1</td>
<td>3</td>
<td></td>
<td>8</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Offering a Choice</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td></td>
<td>5</td>
<td>0</td>
<td>3</td>
<td></td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Translation</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td></td>
<td>10</td>
<td>5</td>
<td>1</td>
<td></td>
<td>8</td>
<td>1</td>
<td>5</td>
<td>13</td>
<td>1</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Providing a corr. pattern</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td></td>
<td>17</td>
<td>5</td>
<td>5</td>
<td></td>
<td>9</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Providing explanation</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
<td>10</td>
<td>2</td>
<td>6</td>
<td></td>
<td>9</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Total med. strategies</td>
<td>97</td>
<td>43</td>
<td>67</td>
<td></td>
<td>105</td>
<td>24</td>
<td>94</td>
<td></td>
<td>96</td>
<td>40</td>
<td>76</td>
<td>116</td>
<td>34</td>
<td>102</td>
<td>128</td>
</tr>
</tbody>
</table>


With regard to regression and progression, the counts of learners’ responsive moves demonstrate that generally the learners tended to produce more progressive than regressive moves. The comparison of total numbers concerning regressive and progressive moves shows an impressive increase in production of progressive moves, specifically at time 3: the number of progressive moves almost doubled from time 1. From a Vygotskyan perspective, this tendency clearly points to the growth of the learners’ listening ability in the ZPD.
Table 7-2: Learners’ moves within the ZPD (during DA1-MP, DA2-MP and TA3-MP)

<table>
<thead>
<tr>
<th>Category</th>
<th>Chris DA1 DA2 TA3</th>
<th>Fée DA1 DA2 TA3</th>
<th>Dan DA1 DA2 TA3</th>
<th>Erica DA1 DA2 TA3</th>
<th>Mona DA1 DA2 TA3</th>
<th>Lora DA1 DA2 TA3</th>
<th>Michel DA1 DA2 TA3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unresponsive</td>
<td>2 0 1</td>
<td>1 2 2</td>
<td>3 1 11</td>
<td>0 1 4</td>
<td>0 3 6</td>
<td>9 3 10</td>
<td>3 3 5</td>
</tr>
<tr>
<td>Responsive</td>
<td>2 0 1</td>
<td>1 2 2</td>
<td>3 1 6</td>
<td>0 1 4</td>
<td>0 3 6</td>
<td>9 3 10</td>
<td>3 3 5</td>
</tr>
<tr>
<td>Provides neg. response</td>
<td>25 11 11</td>
<td>24 5 24</td>
<td>21 3 9</td>
<td>17 3 10</td>
<td>27 14 14</td>
<td>27 17 18</td>
<td>27 14 17</td>
</tr>
<tr>
<td>Provides pos. response</td>
<td>24 10 19</td>
<td>27 9 29</td>
<td>22 12 23</td>
<td>18 12 16</td>
<td>25 16 26</td>
<td>25 15 18</td>
<td>24 14 23</td>
</tr>
<tr>
<td>Makes a wrong choice</td>
<td>2 0 0</td>
<td>1 1 2</td>
<td>2 0 3</td>
<td>1 0 1</td>
<td>0 1 1</td>
<td>8 1 0</td>
<td>0 0 1</td>
</tr>
<tr>
<td>Makes a right choice</td>
<td>1 0 3</td>
<td>1 0 2</td>
<td>3 0 0</td>
<td>0 0 2</td>
<td>1 0 0</td>
<td>1 0 1</td>
<td>1 4 2</td>
</tr>
<tr>
<td>Does not decipher a pat.</td>
<td>10 8 5</td>
<td>10 1 5</td>
<td>8 1 7</td>
<td>14 1 5</td>
<td>15 10 7</td>
<td>15 2 9</td>
<td>12 8 7</td>
</tr>
<tr>
<td>Decipher a pattern corr.</td>
<td>13 11 16</td>
<td>11 9 19</td>
<td>16 10 22</td>
<td>16 6 18</td>
<td>11 12 20</td>
<td>14 6 15</td>
<td>10 12 15</td>
</tr>
<tr>
<td>Does not overcome a problem</td>
<td>4 4 2</td>
<td>6 2 3</td>
<td>4 2 5</td>
<td>7 1 3</td>
<td>4 6 5</td>
<td>7 3 7</td>
<td>5 9 3</td>
</tr>
<tr>
<td>Overcomes a problem</td>
<td>10 4 11</td>
<td>7 3 8</td>
<td>8 5 10</td>
<td>9 5 10</td>
<td>14 5 4</td>
<td>7 3 7</td>
<td>3 5 3</td>
</tr>
<tr>
<td>Total respon. moves</td>
<td>93 48 69</td>
<td>89 34 96</td>
<td>90 35 96</td>
<td>82 30 73</td>
<td>97 70 89</td>
<td>122 53 95</td>
<td>88 72 81</td>
</tr>
<tr>
<td>Total regres. moves</td>
<td>43 23 19</td>
<td>42 11 36</td>
<td>38 7 35</td>
<td>39 6 23</td>
<td>46 34 33</td>
<td>66 26 44</td>
<td>47 34 33</td>
</tr>
<tr>
<td>Total progrs. moves</td>
<td>50 25 50</td>
<td>47 23 60</td>
<td>52 28 61</td>
<td>43 24 50</td>
<td>51 36 56</td>
<td>56 27 51</td>
<td>41 38 48</td>
</tr>
</tbody>
</table>
7.7 Conclusion

The chapter provides a qualitative analysis of the mediational strategies and learners’ responsive moves that occurred during DA-MP and TA-MP sessions. The chapter also affords deeper insight into tendencies regarding progression and regression revealed by the aggregate quantitative analysis (see Chapter 6). The microgenetic examination of mediator-learners’ dialogic interactions is presented in a systematic way and is illustrated with protocols from the assessments. The mediational strategies are organized around their functions, i.e. managing the interactions; helping the learners to reconsider recall; helping the learners to overcome the problem; enhancing listening comprehension and promoting L2 development. With regard to the learners, their responsive moves are first categorized according to five developmental levels, as proposed by Lantolf and Aljaafreh (1994), and then are arranged according to two categories: 1) moves reflecting particularities of listening development within the ZPD; 2) moves mirroring the effects of DA-based instruction.

The outlined inventories of mediational strategies and learners’ responsive moves serve as the foundation for tracking the growth of listening ability as it occurred in the ZPD. That is, the results of the quality of strategies and moves are supplemented and fine-tuned by means of frequency analysis of individual learners’ performance that offer additional insights into the developmental paths followed by each learner. The frequency analysis, graphically presented in Tables 7-1 and 7-2, captures the occurrence of strategies and moves at three different points in time over the course of the study. This
analysis allows for learners’ performances to be compared at the pre-test and two points at the post-test stages as well as to look at the changes in the amounts and kinds of mediation required at these three points and the learners’ response to the mediational strategies.

The analysis revealed that Replay was the most frequent and the most prevalent strategy made by the mediator throughout all DA-based portions of sessions. The counts of learners’ responsive moves show that generally all learners demonstrated an increase in their ability to correctly decipher various patterns at time 3 and a decrease in not deciphering patterns incorrectly. The shift in the amount of correctly heard patterns is considered here the most important indicator of the learners’ listening development since it clearly points to independent functioning and movements away from reliance on the mediator’s assistance. Additionally, the comparison of the learners’ regressive and progressive moves made by the learners at three different points in time shows a predominance of progressive moves, specifically at time 3. This finding is interpreted here as an indication of the extension of the learners’ ZPD for listening comprehension.

The next chapter continues to present qualitative data analysis but focuses on the diagnostic capacities of DA. The goal of the chapter is to address concerns that have been voiced in recent L2 listening and assessment research and to discuss them from a Vygotskyan perspective.
Chapter 8

Mediated Listening Performance: Diagnosing the Potential Level of development

8.1 Introduction

As discussed in chapter 2, recent L2 listening research has been concerned with the current lack of diagnostic tests intended to better inform instructional practices (see sections 2.5 and 2.6). The present chapter responds to this concern, nicely articulated in Buck (2003:97), who claimed that “there are currently few diagnostic tests of listening, largely because we still do not fully understand what the important sub-skills of listening are; nor are we sure what information educators need to teach [and to assess] listening better”. This chapter also responds to Vandergrift’s (2007) concern regarding the current insufficient level of knowledge about listening comprehension processes and to his call for research which explores the interaction of these processes with bottom-up and top-down knowledge through “in-depth qualitative methods to better understand how L2 listeners attain successful comprehension” (p. 206).

Dynamic Assessment, employed in this study, is understood as the dialectic unity of instruction and assessment, which permits a fine-grained diagnosis of what otherwise would likely remain as hidden abilities (in Vygotsky’s terminology, abilities that are ‘ripening’), identifies problem areas, while at the same time promoting development. The DA framework probes learners’ abilities through dialogically negotiated mediation along with genetic (microgenetic or ontogenetic) analysis and allows us to gain greater insight
into the processes accompanying the development of these abilities. This chapter thus focuses on the results of a qualitative microgenetic analysis of learners’ mediated listening performance and considers it from two angles: (1) the process of listening development and (2) the diagnosis of linguistic and cultural problem areas affecting the listening comprehension of intermediate learners of French.

Prior to the beginning of this study, it was assumed that learners’ ability to understand authentic spoken French would be impacted by the lack of phonological, grammatical, lexical and cultural knowledge. The microgenetic analysis confirmed this assumption and established that, among the above mentioned L2/C2 components, phonology turned out to be the most problematic area, causing substantial breakdowns in learners’ text comprehension. With this in mind, the present chapter is organized as follows: section 8.2 briefly describes details concerning the data subset to be analyzed, section 8.3 outlines some considerations raised by L2 research regarding the assessment of listening processes, sections 8.4 – 8.7 present the results of the qualitative data analysis with examples illustrating how the linguistic and cultural problem areas that impeded the learners’ text comprehension were diagnosed through dialogic mediation. These areas are examined in the following order: phonology (8.4), interplay among linguistic and cultural problem areas (8.5), grammar and lexis (8.6), cultural references (8.7). Section 8.8 integrates the results of the analyses and contains some conclusions concerning the effects of DA on L2 listening comprehension.
8.2 Focal study data subset: mediated listening performance

The qualitative analysis takes into account mainly the portion of each assessment session that involved learners’ mediated (or assisted) performance (MP) but also draws on the independent recalls (IP) when useful. The mediated performance subset occurred during the pre-test stage (DA1-MP, TA1-MP) and the post-test stage (DA2-MP, TA2-MP, TA3-MP and TA4-MP). As explained in chapter 5, during the mediated portions of the DA and TA sessions participants listened to the selected texts as many times as they needed and were offered mediation as problems arose. In accordance with Interactionist DA (see chapter 4), mediation was calibrated to the learners’ ZPD and included leading questions, hints and prompts which emerged during the dialogic interaction between each learner and the mediator.

In order to better illustrate the developmental path and the learners’ emerging capacity to recontextualize their improved listening comprehension, the qualitative analysis also refers to some examples from independent listening performance. The illustrations from learners’ independent recalls were used whenever it was necessary to demonstrate learners’ enhanced listening ability and their emerging capacity to recontextualize it in other listening contexts. From the perspective of SCT, this ability to recontextualize and reapply knowledge in situations other than the original situation is considered evidence of development.
8.3 Mediated recalls: diagnosing problem areas

L2 listening research views listening as an ability in which cognitive and linguistic aspects are closely interrelated (e.g. Rubin, 1994; Buck 2003; Vandergrift, 2007). Buck (2003), for example, explains that in the case of L1 adult listeners, both aspects are relatively well-developed, whereas in L2 adult listeners, cognitive abilities are relatively well-developed but language knowledge usually varies from one learner to another and may not be stable. Thus, successful or unsuccessful L2 listening performance is more likely to be affected by learners’ differences in language competence. For this reason, Buck suggests basing L2 listening assessment on various aspects related to language competence, i.e. phonology, stress and intonation, word meanings, lexis, syntax and discourse features.

It should be noted, however, that such linguistic knowledge as syntax and lexis also play a crucial role in reading, writing and speaking (Field, 2003). By recognizing the importance of lexical and grammatical knowledge in oral processing, this study emphasizes the significance of phonology since it represents a feature that is heavily implicated in listening ability. As we will see, even though the learners displayed comprehension breakdowns related to both bottom-up and top-down L2 knowledge, French phonology appeared to be the most pervasive problem area for all of them. The following subsections provide examples of L2/C2 problems that caused the misinterpretation of texts and were typical of all participants in the study. The subsections consider L2/C2 phenomena in the following order: phonology, interplay among L2/C2 knowledge, grammar, lexis, cultural references.
8.4 Phonology: diagnosing the problem through mediation

All learners, regardless of the length of French study, experienced problems associated with French phonology. These problems continued throughout all assessment sessions, i.e. before the enrichment program and after. Through the qualitative analysis it was revealed that due to poorly developed French phonology, the learners tended not to recognize the words they already knew well, including cognates (e.g. le porc, un consensus, café dilué etc.). The discussion below illustrates specific mediator-learner interactions that allowed for the identification of the problems related to phonology. The discussion begins with an example that was representative of all learners.

The analysis of data obtained in DA1, the initial mediation session, has shown that all learners experienced a problem related to recognition of the word le porc, which appeared in the DA1 text (see Appendix H for the complete transcript of the DA1 text in French and its translation into English). In this text the speaker compared French and American eating habits and, among other things, expressed his opinion of meat consumption in the US:

Extract 1 (from the DA1 text):

… au niveau de la viande j’ai remarqué que c’était beaucoup de volaille et beaucoup de bœuf… très peu de porc et jamais de lapin… jamais de… de canard … jamais de choses un peu plus recherchées... le bœuf ça sera du steak haché ou un beefsteak... ça ira jamais plus loin…

… speaking of meat, I noticed that there was a lot of poultry and a lot of beef… very little pork and never rabbit... never duck... never something a bit fancy…
Interestingly, when listening to this passage of the text, the learners recalled the word *porc* as ‘butter’ (*le beurre*). Analysis of this misinterpretation points to confusion of two sounds: French [p] and English [b]. One possible explanation of this apparent phonological problem might reside in the fact that French [b] is fully voiced whereas English [b] is partially voiced and tends to be close to French [p] in its articulation. Comparison of the differences between the two languages can be depicted as follows:

<table>
<thead>
<tr>
<th>French [b]</th>
<th>French [p]</th>
</tr>
</thead>
<tbody>
<tr>
<td>English [b]</td>
<td>English [p]</td>
</tr>
</tbody>
</table>

Figure 8-1: Comparison of differences between [p] and [b] in French and English.

Apparently, the confusion of English [b] and French [p] sounds forced the learners to hear *porc* as *beurre* and to recall *très peu de porc* (very little pork) as ‘very little butter’. This phonological problem is exemplified by the excerpts from Chris’ and Michel’s independent recalls and a set of protocols of their mediated performance during DA1.

---

66 I would like to thank Professor Barbara Bullock for helping with the analysis of this particular phonological problem.
8.4.1 Recognizing the words

During the independent portion of the DA1 session, after two listenings, Chris recalled the ‘Meats’ extract from the DA1 text as follows:

**Excerpt 1 from Chris’s independent recall (DA1-IP)**

and then he went on to discuss different meats that we eat and said that uhm… in America it’s chicken, steak, beef, **butter** … but not at all… not much duck… and.. uhm… not much **bread** and… lets’ see… and nothing else very hard to find...

In the course of the DA1-MP session the Researcher (R henceforth) and Chris (C, henceforth) returned to the ‘Meats’ segment again. After having listened to it for the third time, Chris recalled it in the following way:

**Protocol 30**:

1. C: uhm... the meat... there is a lot of ...a lot of beef... a lot of chicken...
2. a lot of **butter**...
3. R: here?
4. C: yeah.... here in America... and there is no ... not a lot of **bread**, duck and...
5. I think he says things that hard to find... like **chercher**... so, I am guessing...
6. he is speaking of rare.... more specialty issues...

Protocol 30 shows that, at the beginning of DA1-MP after three listenings, Chris still hears **porc as beurre** (line 2). Later in the session (see Protocol 31), R helps the learner by focusing his attention on the fact that the passage discusses the topic concerning meat:

**Protocol 31**

---

67 Protocols’ numeration is continued from Chapter 7.
1. R.: ...OK... yeah... now... just in this part he is talking about... it’s only about meat... and meat in French is...?
2. C.: ... *la viande*...
3. R.: yes, exactly *la viande*... so it’s only about meat... it’s not about bread....
4. it’s not about butter... so my question is: what kind of meat do you know? ...
5. C.: ... turkey.... turkey and chicken...
6. R.: OK speaking of turkey and chicken, how do you call them when they are put together?
7. C.: ... *la dinde, le poulet*...
8. R.: I mean in English... when we say chicken, turkey... kind of bird meat...
9. how do we call it in English,... in general? We say... ‘poultry’...
10. C.: yes...poultry...
11. R.: ...do you know the word poultry in French?
12. C.: ... yes... *la poule*...
13. R.: poultry is not French, this is an English word.... we say *la poule* or *le poulet* in French... and do you know this word [poultry] in French?
14. C.: ... no ... not the equivalent of poultry...
15. R.: OK... it’s gonna be *la volaille*... this is poultry in French...
16. and then you said beef...
17. C.: yeah... beef...
18. R.: ... and in French it’s (rising intonation)
19. C.: *boeuf* (pronounced as [bœːf])
20. R.: ... so... *la volaille, le boeuf*...
21. C. : *le poulet*... and...uhm... how was that ?... uhm... *le canard* and...
22. he also mentions beefsteak... like a steak later...
23. R.: beefsteak... yeah... but speaking of meat...
24. C. ... oh! ... pork...
25. R.: ...OK... in English we say pork and in French we say...?
26. C.: silence (long pause)
27. R.: in French we say *le porc* [pɔʁ]. this final ‘c’ is silent [R writes down this word for Chris] OK so *la volaille, le boeuf, le porc* and we said *le canard*
28. C.: ... and lamb?
29. R.: ... lamb is *mouton* but I am not sure if he mentions it... let’s listen...

In lines 1 and 2 R provides an implicit hint narrowing the topic of the ‘Meat’ passage. R then tries to identify the source of misunderstanding and assesses Chris’s
knowledge of ‘meat’ vocabulary in French to make sure that he is familiar with those words (lines 2-30). R finds out, for example, that the word ‘poultry’ is absent from Chris’ French vocabulary (lines 13-18). Additionally, he does not know how to pronounce correctly the word ‘pork’ (line 29). In both cases, R provides the learner with explicit explanations. In relation to the word ‘poultry’, Chris’s independent recall and his recall at the beginning of DA1-MP shows that he did not mention the word la volaille. In fact, based on his response to R’s mediation, it seems clear that he did not know this word (lines 14-17). This explains to some extent why he fails to mention poultry in his recall.

In Protocol 32, from a later point in the DA1-MP session, Chris shows his ability to recall the passage in question correctly with minimal intervention from R.

**Protocol 32**

**4th listening during DA1-MP**
1. C.: (during the listening) ... oh!!!! lapin... rabbit.... rabbit!!!
2. R.: ... awesome!!! ... that’s awesome... le lapin... so he says...
3. C.: jamais de lapin et de... de canard…
4. R.: ... exactly... and speaking of other parts, what can you say?
5. C.: ... he says beaucoup.... de... (pause)
6. R.: beaucoup de what ?
7. C.: beaucoup de volaille... le bœuf... le porc (pronounced as [pɔʁ])…
8. R.: beaucoup de porc… and what else?
9. C.: silence

**5th Listening**
10. C.: ... very little... very little.... très peu de porc et jamais de lapin et de canard…

Protocol 32 provides evidence of Chris’s phonological ability to hear correctly a newly acquired word (la volaille) and to decipher the words he already knew (le porc) after having received explicit mediation. Protocol 32 also demonstrates that, once Chris’s attention was oriented to the ‘Meat’ topic, having eliminated bread and butter from
consideration, he was able to recognize the word *le lapin* (rabbit) recalled as ‘bread’ during DA1-IP and at the beginning of DA1-MP (see Protocol 30). In line 1 Chris pronounces and then translates this word appropriately without R’s help. Chris’s inability to recognize spoken forms of *porc* and *lapin* can be accounted for by his lack of familiarity with the appropriate pronunciation of French voiced and voiceless stops. He certainly would have recognized these words in reading since he knows the meaning of both. In fact, Chris’s immediate responsiveness to the assistance attests that his ability to comprehend authentic aural French is developing and is at the ripening stage.

### 8.4.2 Not recognizing the words

The discussion below is based on several excerpts taken from Michel’s DA1 session. The discussion begins with a full version of Michel’s independent recall of the DA1 text:

*Full version of Michel’s independent recall occurred in DA1-IP:*

First he says something about the breakfast and how French … may be just… like baguette [*le bagel*] and croissant or … umh… dessert [not

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68 For the readers’ convenience, the full version of the DA1 text (translated into English) is presented here (see also Appendix H):

I noticed that breakfasts are rich here, sweet-salted while in France breakfasts are mainly sweet and cereals, croissants et cetera. I also discovered bagels which is… which is a bit weird in comparison to what we can eat in France because it is quite salted whereas in France we are rather used to eat a croissant or a ‘pain au chocolate’ which are sweet. Speaking of coffee, no special remarks except one: in France people would prefer a little strong espresso rather than a big mug of diluted coffee. Thus, Americans are used to eat… to drink these big mugs of diluted coffee. Also, speaking of meat, I noticed that it was a lot of poultry, a lot of beef, just a bit of pork and it was never rabbit, never duck, never something a bit fancy. If it’s about beef, it’s about a beef burger or a beefsteak, it doesn’t go further… and vegetables don’t have any taste… they are… I have the impression that I eat water. They don’t have any taste. Pasta is also overcooked, really overcooked and is a bit floury. Thus, those are differences, otherwise what I always eat here… a lot of pizzas, of hamburgers, of desserts… hum, speaking of desserts, chocolate cakes don’t have chocolate taste, they are sugary, it’s rather a concentration of sugar. These are big remarks and also there are a lot of sodas here, a thing that you will never see in France.
... and then... he said... may be a little cup of coffee or café au lait (café dilué) and Americans like bigger ones... uhm... then... Americans eat a lot of pizza, hamburgers ... and dessert... [long pause] vegetables... I think the Americans eat vegetables ... that are what I’ve got.

Michel’s independent performance shows that his understanding of the text is quite limited. Although he was able to pick up a number of IUs and isolated words mentioned by the speaker (e.g. breakfast, coffee, vegetables), he could not correctly recall the text. Additionally, he also had problems with French pronunciation that resulted in his interpreting le bagel (pronounced as [ba'goel] by the speaker) as ‘baguette’, and café dilué (diluted coffee) as café au lait. The independent recall also indicates that Michel misunderstood (e.g. vegetables, pizza/hamburgers) and omitted many ideas mentioned by the speaker. For example, he completely missed the passage where the speaker compared American and French eating habits in terms of meat consumption.

The following paragraphs provide a protocol from Michel’s data which occurred in the DA1-MP session. Protocol 33 begins at the point in the session where R and Michel (M henceforth) discuss the ‘meats’ portion of the text:

Protocol 33

3rd listening (after two listenings in DA1-IP)
1. M.: can I try it again? I heard a lot of words but I can’t put them together.
2. R.: OK... what kind of words did you hear?
3. M.: I heard acheter un bifteck or hamburger...
4. R.: acheter?
5. M.: yes... ‘acheter’ like ‘to buy’ and then ‘beurre’ like ‘butter’
6. R.: something like ‘butter’? ... and what else?
7. M.: umh... can we repeat?
8. R.: yes, we can repeat.
Michel’s request to replay the text in lines 1 and 7 is an indication of the problems he is having. In line 2 R poses a question with the intention of clarifying the words he claims to pick up from the text. Michel’s answer (line 3) confirms his word-recognition difficulties, which manifest themselves in the misinterpretation of the words embedded in the text. For example, he confused the words steak haché ou un bifteak (ground steak and beefsteak) and recalled them as ‘acheter un bifteck (to buy a beefsteak) or humburger’. Similar to other learners in the study, Michel exhibits phonological confusion while recalling porc as butter (line 5). This phonological confusion, as documented in protocol 34, persisted after the 4th and 5th listening of the text.

Protocol 34

After the 4th listening
1. M.: ...very little butter? I heard…
2. R.: butter? … please tell me where do you hear ‘butter’?

During the 5th listening:
3. M.: here it is like ‘beurre’… [the place where the speaker said porc]

Later R prompts Michel by orienting his attention to the ‘meat’ topic (a strategy that worked well with Chris, see 8.4.1) and, at the same time, she intends to verify his knowledge of particular lexical items needed for comprehension of the text passage in question.

Protocol 35

1. R.: what kind of meat do you know?
2. M.: Beef, pork, poultry…
3. R.: … how would you say it in French?
4. M.: Le boeuf, le porc, la viande 69 … and poultry?

69 All of these French words were pronounced correctly by Michel.
5. R.: oh... you don’t know this word? ... it’s gonna be *la volaille*…
6. *so la volaille* and you said *le boeuf, le porc, la viande*…

As documented in Protocol 35, Michel knows the words needed for, at least, limited understanding of the ‘Meats’ text, except for the word ‘poultry’. This forces R to provide him with an explicit hint: she translates this word for Michel. In line 6 R intentionally repeats all the words mentioned by Michel (line 4) so that he hears them with appropriate pronunciation. She then proposes that he listen to this passage again. Consider the mediated interactions that occurred between R and Michel after this additional listening:

**Protocol 36**

**After 6th Listening**

1. R.: did you hear *la viande*?
2. M.: no
3. R.: did you hear *la volaille*?
4. M.: no
5. R.: did you hear *le boeuf*?
6. M.: no
7. R.: did you hear *le porc*?
8. M.: no
9. R.: ... ok he starts the whole thing by saying… he says ‘au niveau de la viande…’

After the 6th listening to the ‘meats’ passage, R re-assesses Michel’s ability to recognize the words he knows well, as attested in Protocol 6, and finds out that he is not able to identify these words in the text (lines 1, 3, 5, 7). This situation induces R to provide Michel with a very explicit hint and she verbalizes the ‘Meats’ part for Michel (lines 9-10).
Protocol 36 provides evidence that Michel’s breakdowns in understanding of well-known words resides in his minimal L2 phonological ability. On the basis of Michel’s independent recall during DA1-IP, one could conclude that the words related to meat are not in Michel’s vocabulary and for this reason he failed to understand this particular passage of the text. However, the use of mediated dialog in DA1-MP allowed R to identify the source of the problem which mainly resided in his poorly developed French phonology. In non-dynamic assessment this type of insight into the source of the learner’s problem would not be very likely to surface.

Michel’s’ inability to segment the words from connected discourse points out that his ZPD for French phonology is very narrow and does not allow him to recognize these words even in collaboration with the mediator. Although Vygotsky (1987:209) elsewhere argued that “[…] in collaboration the child [the learner] can always do more than he can independently”, while discussing the ZPD, he added a stipulation that in collaboration the child (or the learner) “cannot do infinitely more” (Vygotsky, 1987:209). Vygotsky explained this addendum to the ZPD as follows:

What collaboration contributes to the child’s [learner’s] performance is restricted to limits which are determined by the state of his development and his intellectual potential ... In collaboration, the child turns out to be stronger and more able than in independent work. [However] He advances in terms of the level of intellectual difficulties he is able to face... In collaboration the child solves problems that are proximal to his level of development with relative ease. Further on, however, the difficulty grows. Ultimately, problems become too difficult to resolve even in collaboration. (Vygotsky, 1987:209-210)
In fact, Michel’s case provides empirical support within an L2 context for the following Vygotsky’s (1987: 209) claim: “[O]ur research demonstrates that the child does not solve all unresolved problems with the help […] He advances only up to a certain limit, a limit which differs for different children.” That is, even though R’s mediation during DA1-MP was continuously tuned and re-tuned to Michel’s level of listening ability, it did not help him control this particular listening task. The inclusion of DA-based interactions, however, enabled R to identify the extent to which Michel was able to cope with French spoken discourse during his initial DA session.

8.4.3 Phonology: microgenetic gains

As indicated earlier, the use of the methodology of microgenetic analysis facilitated tracking the learners’ L2 listening development over time. The analysis of learners’ listening performance revealed some improvement in their ability to understand French authentic aural discourse which manifested itself during the transfer sessions. For example, the TA2 text contained exactly the same words that caused breakdowns in understanding during the DA1 session, i.e. pork and rabbit. Consider the following passage from the TA2 text in which the speaker discusses dining habits in his family:

Extract 2 (from the TA2 text):

... les repas sont composés pas de viande de légumes principalement donc les viandes ça pourrait être du bœuf du porc du canard du lapin toutes... tous les types de viande et les légumes ça sera des haricots des petits pois des carottes euh autre chose que les légumes des pommes terre...
Meals are composed of ... not necessarily of meat... but mostly of vegetables... in terms of meat ... it could be beef, pork, duck, rabbit… all types of meat… and in terms of vegetables it can be green beans, peas, carrots... hum... other things in terms vegetables can be potatoes...

The next excerpts taken from Chris’s and Michel’s TA2 independent recalls, produced after two listenings, provide evidence of their ability to recognize familiar words in a relatively new context (it should be remembered that the TA2 session was designed as near transfer: see chapter 5 for details).

**Excerpt 2 from Chris’s independent recall (TA2-IP)**

... and then… then he starts talking about what they eat… and he definitely mentioned the… as far as… le canard, le porc… hum… hum… and…rabbit … he talked about ... there are vegetables as far as I know he mentioned the green beans… potatoes… carrots… peas...

**Excerpt 3 from Michel’s independent recall (TA2-IP)**

... and then he talked about what they normally have to eat or what they have to eat and he said a lot of meats ... the duck, the rabbit, the pork and then he said the vegetables like haricots, then carrots...

The excerpts below occurred during the seventh week of the study. They show that Chris and Michel have made some progress through their ZPD in developing their listening ability, since the learners recognized the words ‘pork’ and ‘rabbit’ during independent listening performance. This microgenetic developmental progress is mainly attributed to the enrichment program and mediation provided throughout the DA1, TA1 and DA2 sessions.

More importantly, these data confirm the SCT view of development. That is, “potential development varies independently of actual development and the latter cannot
be used to predict the former” (Lantolf, 2008: slide 670). As illustrated in protocols 3 and 6, during the DA1-MP session Chris and Michel required different forms of mediation. In fact, Protocol 6 witnesses Michel’s inability to control the listening task even after explicit help provided by R whereas Chris needed relatively minimal assistance to complete the same task. However, the comparison of Michel’s and Chris’s TA2 independent performances demonstrates that both were able to regulate themselves almost identically. With regard to this passage from the TA2 text (see Extract 2), Michel’s improvement can most likely be attributed to the mediation tightly tuned to his ZPD during the DA1-MP, TA1-MP and DA2-MP sessions (conducted on one-on-one basis) as well as to his strong motivation to improve his listening abilities by participating in this study (see also 6.5.8. for a discussion on Michel’s motivation which manifested itself in his desire to listen to additional aural texts not included in the study).

8.5 Interplay among linguistic and cultural problem areas

With regard to Extract 1 (from the DA1 text), it was found that the learners tended to recall incorrectly the following passage: très peu de porc et jamais de lapin (very little pork and never rabbit). Without exception the learners initially recalled this passage as ‘very little butter and never bread’. Some learners were already able to recall it in this way during their independent recall (e.g. Chris and Dan), while other learners recalled it

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70 This quote is taken from the PowerPoint presentation entitled “Unifying Assessment and Instruction in Support of L2 learning”. This paper was presented at the ACTFL 2008 conference in Orlando, FL. Co-presenters: Lantolf, J.P., R. Ableeva and M. Poehner.
using the same incorrect words only during the mediated portions of DA1, after additional listenings.

I believe that the difficulties related to this passage were generated by various linguistic and cultural problems. On the one hand, these incorrect recalls might be attributed to the fact that initially some learners perceived the passage as ‘bread and butter’ because this expression represents a frozen binomial. That is, given that bread and butter normally co-occur in the binomial bread and butter, presumably, the learners were led down a garden path to interpret the section as relating to eating bread and butter.

On the other hand, during the mediated interactions it was revealed that recognition of porc was mostly related to phonological problems, since learners’ L1 possesses a similar cognate, and recognition of lapin (rabbit) had to do with a number of factors:

1. Phonology: the learners knew the word but failed to recognize it in the connected discourse due to its phonetic quality of (e.g. unstressed words, assimilation, varying speed of the speech stream);
2. Lexis: the learners did not know the word, e.g. in some cases the learners confused le lapin with le pain (bread);
3. Culture: such cultural reference was absent from learners’ L1 culture, i.e. this may reflect learners’ everyday knowledge connected to American eating habits, where rabbit is not commonly consumed.

The following protocol, taken from Fée’s DA1-MP, represents the interplay of three factors (i.e. lack of lexical knowledge, phonology and culture) that impeded her comprehension of the ‘very little pork and never rabbit’ pattern. In fact, Fée was able to
recognize many words related to the ‘meat’ passage on her own but after a number of
listennings she never mentioned le lapin during her independent and mediated
performance. The next protocol begins with a relatively implicit form of mediation: R
orients Fé’s attention to the word lapin that she apparently does not hear correctly.

Protocol 37

1. R.: ... try to understand what he is saying after the first jamais.
   
   **Listening**
2. F.: jamais de *labin? (pronounced as [labè])
3. R.: ok...it’s all about animals uh meaning meats... so-o... what did you say la?
4. F. : *labin … jamais de* labin (rising intonation)
   
   **Listening**
5. F.: jamais de* labin… I don’t…. (laughter)
6. R.: …ok…. so … you say labin or lapin?
7. F.: I thought it was labin...
8. R.: ... yeah.... and if you say lapin... does it make sense?
9. F.: I don’t know either word is like....
10. R.: and lapin? ... think about meat.... lapin.... think about animals...
11. F.: ... lamb?
12. R.: ...lamb is mouton.... le mouton... et lapin... so he says jamais de lapin
13. and you say lapin or labin =
14. F.: = right.... =
15. R.: = jamais de canard, jamais de choses un peu plus recherchées… so it’s kind of ...
16. he refers to fancy stuff =
17. F.: = right=
18. R.: and speaking of fancy meat for instance for you what is fancy deli duck, is it deli?
19. F.: yeah duck is fancy...
20. R.: and what else is fancy?
21. F.: [silence]
22. R.: so lapin.... lapin is an animal.... so lapin (R makes a specific gesture
   outlining a rabbit)
23. F.: oh... rabbit? (surprised)
24. R: .....yeah.... how do you know it’s rabbit?
25. F.: because you just did that (Fée repeats R’s rabbit-like gesture and laughs)
26. R.: ... oh... because of that? (laughter)... yeah.... it’s rabbit...
27. F.: I didn’t know people eat rabbits....
28. R.: ... here? ... in the United States?
29. F.: I mean... they [Americans] don’t here but I didn’t know they [French people] eat rabbits in France...
30. R.: in France they eat rabbits... domestic rabbits... not the rabbits that you can find in the forest
31. F.: ...ok... (laughter)

In lines 2, 4 and 5 Féé produces an erroneous aural form of lapin pronounced as [la'bɛ̃] which clearly points to the confusion between [p] and [b] sounds. Féé’s confusion, in fact, supports the earlier phonological analysis regarding the learners’ problems with the [p] and [b] contrast as it played out in their misinterpretation of the word porc (see 8.4.1 for the discussion of Chris’s performance). This situation compels R to think that Féé has a phonological problem and induces R to offer Féé a choice (line 6) intended to elicit her lexical knowledge. This hint in the form of a choice does not help Féé to overcome the problem and further interactions (lines 7-24) reveal a lexically-related problem since Féé’s utterances in lines 9, 21 and 23 confirm that she does not know the meaning of the word lapin. Finally, Féé overtly states her surprise regarding rabbit meat consumption (line 25): apparently this C2-related reference is absent from her everyday knowledge (line 27). The protocol concludes with R’s brief explanation regarding this particular C2 detail, which is done in accordance with DA principles where assessment and instruction are meant to be used jointly.
8.6 Diagnosis of grammatical and lexical problems

Some L2 listening researchers prioritize vocabulary knowledge in listening comprehension and view the lack of it as one of the major factors negatively affecting the comprehension of aural texts (e.g. Mecartty, 2000; Vandergrift, 2006). In a study investigating vocabulary and grammar contributions to L2 listening, Mecartty (2000, as cited in Vandergrift, 2006) using multiple regression analysis, found that lexical knowledge emerged as a significant factor in aiding listening comprehension, whereas grammar knowledge did not appear to have a considerable influence on listening ability. Similar results were also reported by Vandergrift (2006). In his study, which examined the contributions of L1 listening ability and L2 proficiency to L2 listening comprehension, Vandergrift revealed, through a quantitative method, the importance of vocabulary knowledge for comprehension of spoken texts. On the basis of relevant L2 reading and listening research, Vandergrift claimed that L2 listening depends more on lexical knowledge and less on grammatical knowledge and that the findings from his and other relevant studies “point to the potentially important role of vocabulary development (less so grammar) in L2 listening proficiency” (ibid., p. 15).

The results of the present study analyzed through a microgenetic (i.e. qualitative) method support the findings of previous L2 listening research concerning the importance of lexical knowledge. However, the qualitative analysis also provides some empirical evidence in support of the role of grammatical knowledge for listening comprehension. The following subsections focus on the results that reveal the influence of grammar (8.6.1) and vocabulary (8.6.2) on L2 listening by looking at the process of listening.
8.6.1 Diagnosing grammar-related problems

With regard to knowledge of grammar and its influence on listening ability, the overall trends that emerged were as follows: (1) in some cases, learners displayed comprehension breakdowns due to problems with grammatical knowledge of French; (2) in other cases, learners failed to recognize previously acquired grammar points in connected discourse, and these led to the lack of precision concerning IU recall. In effect, the students mostly experienced difficulties with tense recognition, specifically with tenses that are not frequently used in L2 educational contexts, e.g. the simple future or the present conditional. Thus, it may be assumed that these tenses raise obstacles to text understanding for intermediate university L2 learners due to their limited exposure to this type of linguistic affordance. Three of these grammar-related examples are discussed below. The first example illustrates how the lack of grammatical knowledge led to a breakdown of comprehension. The second example showcases a quick recognition of a familiar grammar point (the verb used in the simple future) with minimal R’ help resulting in accurate IU recall. The third example demonstrates how the inability to recognize infrequently used tenses (simple future and present conditional respectively) led to an inaccurate IU recall.

Le futur simple

The protocols presented in Example 1 and Example 2 demonstrate Lora’s and Fée’s inability to recognize the form of a verb employed in the simple future. In the course of DA-based interactions, it was established that Lora failed to recall correctly an IU containing this tense because this feature of the language was not in her ZPD, whereas
Fée was familiar with it but could recognize this form only after a prompt offered by R. The examples are taken from Lora’s and Fée’s DA1-MP sessions. The protocols deal with the point of the session where students and R discussed the final portion of the DA1 text:

**Extract 3 (from DA1 text):**

... et aussi y a du soda à volonté chose qu’on verra jamais en France....
... also there is lots of soda... something that one will never see in France...

Neither Lora nor Fée mentioned this passage in their independent recalls of the text during DA1-IP. The protocols 38 - 41 document Lora’s and Fée’s struggle to recognize the pattern *on verra* containing the verb *voir* (to see) used in the simple future.

**Example 8-1: Lack of grammatical knowledge**

Protocol 38 exemplifies how the above passage from the DA1 text was recalled by Lora during the mediated portion of the session:

**Protocol 38**

1. L.: ... soda en France… like soda in France...
2. R.: yes… and… umh… what’s the point?
3. L.: ...uhm they drink a lot of soda...

Protocol 38 shows Lora’s limited understanding of the passage (line 1). Following R’s leading question (line 2) intended to clarify her understanding of the passage, Lora again responds vaguely, confirming her lack of comprehension (line 3). The next protocol, taken from a later moment in the same session, provides clearer evidence of her limited understanding and reveals the source of the problem associated
with grammar. At this point R asked Lora to concentrate her attention on the part of the passage that comes after the words *chose qu’* (something that).

**Protocol 39**

**Listening**

1. L.: *chose qu’on verra *chom? 
2. R.: ok, *on verra* and then? 
3. L.: *qu’on verra *chom? [not sure] 
4. R.: ok... here he negates... and what does it mean *‘on verra’*? 
5. L.: *on verra? passé...* Is it *passé...*? ... like *ont...*? 
6. R.: ok, I see what you mean... ok....*verra...on verra...* how would you say in French *‘I will see’*? 
7. L.: *Je vais voir* 
8. R.: ok... *je vais voir...* this is what we call *futur proche* or *futur immédiat* but they have another future... 
9. L: [no response] 
10. R.: ... so what you are trying to say is ... *‘I am going to see’* and how would you say *‘I will see’*? 
11. L.: ... umh....*je vais... *je vais vu? 
12. R.: so... what is French for *‘to see’*? 
13. L.: *voir...* 
14. R.: ... *voir...* exactly... now the future form... I will see? ... *je...* (rising intonation) 
15. L.: [no reponse] 
16. R.: ... ok... now I see the problem...

Protocol 39 demonstrates that Lora is able to hear the aural form of the verb and at least to pronounce it correctly as [*vèra*] (line 1) but she struggles to recall *jamais,* producing an incorrect form, i.e.*chom* \(^{71}\) (lines 1 and 3). R interrupts her (line 4) to make

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\(^{71}\) It should be noted that all learners had difficulties with recognition of the word *jamais.* These difficulties are mainly attributed to the phonetic quality of the pattern produced by the native speaker, since all learners knew well the word *jamais.* In fact, while articulating the pattern *on verra jamais,* the speaker pronounced it quickly, as one word, without marking boundaries between *on verra* and *jamais.* Therefore, misrecognition of *jamais* in the speech stream can be explained by a phonological problem related to lexical segmentation difficulties. That is, the learners were unable to process the utterance embedded in unplanned speech without clearly marked word boundaries.
sure Lora knows the meaning of *on verra* (one will see). The answer given by Lora in line 5 compels R to continue assessing her knowledge regarding the simple future and to provide her with a hint containing a metalinguistic clue in line 8. Lora fails to provide the correct form of the simple future of the verb ‘to see’ and waffles between two inappropriate options: *je vais voir* (the immediate future) and *je vais vu* (an incorrect form made up by Lora). Finally, R’s leading questions and hints do not trigger the production of the correct form (lines 12 and 14). This leads R to conclude that Lora does not know how to form the simple future in French and the only option that she has is to provide Lora with a correct pattern (*on verra*) along with some explanations concerning this tense. In fact, R briefly introduced the simple future tense by offering Lora explanations and information so that she could fill this gap in her knowledge of French grammar.

**Example 8-2: Not recognizing a grammar point**

Protocol 40 presents Fé’s initial attempt to recall the above passage from the DA1 text during her DA1-MP session:

**Protocol 40**

**First listening to ‘Soda’ passage**

1. F.: He said *il y a du soda*?
2. R.: ok… but what’s the point?
3. F.: uhm... I don’t know...
4. R.: ok... let’s listen again...
The next protocol illustrates the point of Fé’s DA1-MP session where R intentionally focuses Fé’s attention on the verb form in order to elicit her knowledge of the simple future tense needed to comprehend this particular IU.

**Protocol 41**

**4\textsuperscript{th} listening**
1. F.: *chose qu’on* something in France
2. R.: ok... this is nice but let’s try to understand more....

**5\textsuperscript{th} listening**
3. F.: *chose qu’on* *verrache* (pronounced as [veraʃ]) en France (not sure, rising intonation)
4. R.: ok… *qu’on verra*… what does it mean *on verra?* .... *on verra?*
5. F.: ... *on verra?* I don’t know that word...
6. R.: ...you don’t know that word? .... ok... how would you say in French ‘I will see’?
7. F.: ah! ok *on verra* ‘one will see’ or ‘someone will see’.... like things someone will see...
8. R.: now what’s the speakers’ point?
9. F.: [silence]

**6\textsuperscript{th} listening**
10. F.: *jamais en France*?..so he said… something that people won’t usually see in France…

In this protocol R’s assistance is manifest in the form of leading questions which intend to lead Fé toward recognition of the verb *voir* in the simple future (line 4 and 6). Her recognition of *voir* (line 7) results in correct recall without any additional direct assistance. In line 9 Fé indeed correctly produces the meaning of the passage in question displaying a correct use of the simple future.

*Le conditionnel présent*

**Example 8-3: not recognizing a grammar point**

The following protocols, taken from Chris’s data, deal with recognition of the present conditional tense. A verb in this tense appeared in the NDA2 text where the speaker discussed the differences between French and American restaurants:
Extract 4 (from the NDA2 text):

... après au niveau de... des restaurants... au moins il y a une chose qui choquerait n’importe quel Français ici... enfin deux choses... c’est la rapidité avec laquelle on est servi mais pas dans le sens on a nos plats... dans le sens... dans le sens... on a fini de manger... on a l’addition direct derrière...

... speaking of restaurants, there is at least one thing that would shock any French person here... basically two things... one is the speed with which you’re served but not in the sense of getting your order... in the sense... in the sense that... as soon as you finish eating... you get your check straightaway...

This passage was recalled by Chris as follows:

Excerpt 4 from Chris’s independent recall (NDA2-IP)

He starts off talking about restaurants here and... versus... versus America and France and he said two things were a bit shocking to him... he said... first said the... the speed... the rapid... how rapid someone is served not in the sense of... how fast the food prepared and brought to your table but in the sense of you eat... the check... the check is put down, you pay and you leave...

The excerpt of Chris’s independent recall shows that he understood a good deal of the passage and recalled it appropriately. He failed, however, to accurately invoke the present conditional form of the verb choquer (to shock). Although Chris’s recall can be assessed as acceptable, this grammatical inaccuracy was returned to during the mediated portion of NDA272.

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72 It should be specified here that initially NDA1 and NDA2 sessions were not intended to be conducted dynamically. However, since the learners experienced many problems while recalling the NDA1 and, specifically, the NDA2 text, the researcher decided to return to these texts at two later points of the study.
The next protocol provides evidence that the grammatical point in question was within Chris’s ZPD; he could showcase this knowledge through dialogic mediation with R. In this protocol R uses the same attention-focusing strategy as in Lora’s and Fée’s cases.

Protocol 42

1. C.: He was shocked…
2. R.: He was shocked?
3. C.: He says he is shocked.
4. R.: He is shocked or une chose qui … (rising intonation)
5. C.: uhm… une chose qui choquerait… oh…oh… I think … I think…
6. it shocks anyone, any French person…
7. R.: and speaking of grammar, how do you understand une chose qui choquerait?
8. C.: = … is he saying imparfait? was shocking?
9. R.: … no… imparfait would be qui choquait but he says qui choquerait…
10. C.: qui choquerait…. qui choquerait…. uhm… (mumbling to himself)
11. R.: so, in terms of grammar… do you… =
12. C.: = is it… ‘it will shock’?
13. R.: ‘will shock’? … this is future, isn’t it? … qui choquera…
14. but he says choquerait… … this is a grammar point.
15. C.: … ok … [inaudible]
16. R.: how would you say ‘he would like’? [hint]
17. C.: oh… oh… it’s… it’s the future stem plus ai… it will be choqu… choquerait
18. R.: = yes… imparfait endings… so… what is this? =
19. C.: = I think it would be ‘would shock… would shock any French person’ =
20. R.: = exactly… that’s what he is saying.

Protocol 42 shows that at the beginning of this segment, Chris still does not identify the conditional tense and wanders among various tenses: the past time statal passive and the present time statal passive (lines 1 and 3 respectively), the past imperfect (line 8), and the simple future tense (line 12). Using leading questions, R focuses Chris’s attention on the problem area. In line 4 R attempts to ascertain how Chris hears the form
in question and eventually succeeds in teasing out a correct tense from Chris (line 5). In fact, Chris’s utterance in line 5 reveals that phonologically he perceives the form correctly. R’s direct translations of the forms (lines 8, 12) and her hint (lines 13 and 14) narrow Chris’s tense choices, and finally he recognizes the present conditional tense (line 17) by recalling correctly, on his own, the IU in question (line 19).

It is important to note here that this study did not intentionally investigate the effects of grammatical knowledge on L2 listening comprehension. All grammar-related difficulties are based only on the grammar points embedded in the texts used in the study and emerged as a result of dialogic interactions between the learners and the mediator. Therefore, this line of research requires collection of additional data and specially focused investigations. More research integrating qualitative analyses should be carried out in order to explore how grammatical knowledge (or the lack of it) influences text comprehensibility among L2 listeners.

8.6.2 Diagnosing lexis-related problems

Vocabulary represented a constant problem for the learners, causing numerous breakdowns in text comprehension. This was expected since the participants were all intermediate L2 learners of French, who were still in the process of building their lexical knowledge. The problems in this area occurred throughout all study sessions, including the enrichment program sessions. With regard to the diagnosis of lexical problems, it was often difficult to identify whether the word was not in the learner’s mental lexicon or whether the learner was not able to recognize a phonetic form of a previously acquired
word in concatenated speech. The DA-based teacher-learner interactions proved to be a helpful diagnostic tool, which allowed the researcher to more accurately identify the source of lexically-based misunderstandings. In general, the lexical problems were unique to individual learners; however, there were several items that were unfamiliar to all of the learners, (see also Protocol 37 illustrating the interplay among linguistic and cultural aspects associated with the word lapin).

8.6.2.1 Diagnosing unknown vocabulary

The next protocol, taken from Fée’s DA1-MP session, exemplifies a common comprehension problem related to the lexicon.

Extract 5 (from the DA1 text):

... et aussi y a du soda à volonté chose qu’on verra jamais en France....

... also there is lots of (at will) soda... something that one will not see in France…

This passage from the DA1 text contains a lexical item - à volonté – which is important for understanding the point made by the speaker. Yet the passage does not supply any context which would help listeners guess the meaning of the item in question (in case if this word is unfamiliar to the listeners). In this kind of situation, R usually provided learners with explicit help, as illustrated in 15.

Protocol 43

First listening to the ‘Soda’ passage
1. F.: … he said il y a du soda ?
2. R.: ok… but what’s the point?
3. F.: uhm... I don’t know...
4. R.: ok... let’s listen again...

2nd listening to this passage
5. F.: ... a vo  lo té les choses? (rising intonation)
6. R.: ... well... il y a du soda he says... soda you understand... right?
7. F.: ... yeah...
8. R.: il y a du soda à...? ... maybe you know this word...

3rd listening this passage
9. F.: ... à *vomonté? (not sure of what she is saying)
10. R.: no... à volonté... do you know this one?
11. F.: à volonté? ... no...
12. R.: à volonté (R writes this word for Fée) means ‘at will’ =.
13. F.: = ah... ok... =
14. R.: = like tones of something... at will...
15. F.: ...ok...

In line 8 R is uncertain about the source of the problem, particularly since Fée mispronounced à volonté (lines 5 and 9). This pushes R to pronounce the word correctly and to ask Fée a direct question concerning the meaning of the word (line 10). The learner’s response reveals that the word is out of her lexical competence (line 11) and that she clearly needs explicit assistance to achieve a better understanding of the passage. In lines 12 and 14 R translates the word for Fée but also writes it on a sheet of paper in order to help the learner form a correct aural and mental representation of this expression.

8.6.2.2 Guessing the meaning of unknown words from the context

In some cases the learners were able to understand the meaning of an unknown word if the text contained sufficient contextual details. The next set of protocols exemplifies how the learner could capture the word meaning through mediated
interactions with R. This example is taken from Dan’s DA2-MP session. The protocols present an instance of the session where Dan struggles to comprehend the word *le pourboire* (tip).

It should be noted, however, that three (Lora, Mona and Erica) out of seven learners were familiar with this word, most likely because of their short study-abroad experience in France. The other four learners guessed the meaning of this word, since the speaker provided a detailed explanation regarding differences between French and American restaurants and included a comparison of the tipping system in France and the US. Extract 6 contains a passage from the DA2 text which presents the speaker’s point regarding tips.

**Extract 6 (from the DA2 text):**

... *je trouve que la grande différence au niveau des restaurants c’est plutôt au niveau du service et de la mentalité du restaurant c’est-a dire que et je pense que une des grandes raisons c’est... c’est le système du... du pourboire parce que ici... parce qu’en France le pourboire est inclus donc y a pas euh y a pas autant de ... de... d’importance accorder au service pas que le service est mauvais en France mais bon il n’est pas non plus génial mais bon...*

I think that speaking of restaurants the big difference consists in the service and in the mentality of restaurants... that is... and I think that one of the most important reasons resides in the system of tipping because here... because in France tips are included... and therefore, there is no... waiters don’t really need to care about service... it doesn’t mean though that the service is bad in France but, well, it is not awesome either... but well...

In his independent recall, during DA2-IP, Dan recalled this passage as follows:

**Excerpt 5 from Dan’s independent recall (DA2-IP):**
she was... she is saying the differences... she says that the big difference is the... the rushed feeling... I think... she doesn’t say it in those words, but that’s the impression I get... she says... because in France you get the service... the server like serveur... the waiter or waitress hum... isn’t... as... ever-present as in America... and she says it's not that they are bad it’s just that... you know she likes them... but they are not as...

As one can see, during his unassisted recall of the passage Dan did not mention the word ‘tip’. However, Protocol 44, taken from Dan’s DA2-MP, provides evidence that he heard le pourboire but did not refer to it because of his unfamiliarity with the word. This protocol reflects the dialogic interactions that occurred between Dan and R after his two first listenings to the DA2 text, i.e. immediately after Dan’s independent recall.

**Protocol 44**

**After two first listenings**

1. R.: yeah... but also at the beginning she said that... yeah... it’s different
2. and the difference... the big difference resides in (rising intonation)
3. D.: their mentality...
4. R.: yeah... mentality she said and then she said... the most important thing
5. is one thing...
6. D.: oh... was that this word which starts with the pi? =
7. R.: = yeah...
8. D.: I don’t know this word... I missed this word... I don’t think I know this word...
9. R.: you don’t think you know? ...ok may be you will guess it from the context... [...]

In line 8 Dan overtly states that he does not know the word le pourboire that he mentions as the word beginning with the letter ‘pi’ (line 6). After this Dan’s statement, R decides not to overload Dan with unnecessary help. Her first intention is not to provide Dan with the correct translation of the word but instead to push him to recognize this
word without her help. For this reason, R begins her mediation by playing the passage one more time, hoping that Dan would discover the meaning of this word on his own.

**Protocol 45**

3	extsuperscript{rd} listening during MP

1. D.: ... pou... *pourboire* (rising intonation)
2. R.: ... yeah... *pourboire*... yes she says *le pourboire*
3. D.: *le pourboire* (D slowly repeats this word after R)
4. R.: do you know this word?
5. D.: no
6. R.: ok but you know the script... I mean when you go to a restaurant what do you usually do?
7. D.: you enter, you get a sit, you order...
8. R.: and then... when you are done what else do you do?
9. D.: ... tip?
10. R.: yeah... ok... so you usually add some money and this money is called (rising intonation)
11. D.: ... is it *le pourboire*?
12. R.: ok now we will listen
13. D.: is that what it is? (laughter)
14. R.: I would like you to listen... now you are on the right path... (laughter)

As illustrated in protocol 45, Dan heard the word and pronounced it correctly (line 1). His rising intonation attests to his uncertainty since he was confronted with a word which was absent from his vocabulary. In fact line 5 provides evidence that this word was not in his lexicon, however, he was able to hear it phonologically accurately without knowing its meaning. The implicit hints (lines 6, 7, 11) provided by R were obviously enough for him since his question in line 12 already showed that the word meaning was almost clear to him. Arguably, Dan figured out the meaning in English because R pushed him into the restaurant schema and then in line 12 he was able to connect the meaning from English with the French word that he heard. However, R insisted on her intention
not to overload Dan with unnecessary help and instead of translating the word she
proposed to him to listen to the passage again (lines 13, 15).

**Protocol 46**

4th **listening to this passage**

1. D.: oh! ... that’s what she is saying... she is saying that she thinks the difference exists
2. because in America you have to think about the tip... that’s not what she said...
3. she said because in France the tip is included in the check...
4. and so what she is saying is that (rising intonation)
5. R. : yeah... she said ça c’est la différence...
6. D.: oh... that’s why she said.... because... she said the tip is included and
7. they are not ....I guess...they are not as attentive in France... and she said not
8. that they are bad in France...

Protocol 46 also provides evidence of Dan’s growing ability to independently
control a listening task. Dan’s utterances in lines 1-3 reveal that he was able to guess the
meaning of pourboire as he correctly referred to it while appropriately recalling the
speaker’s words: ‘in France the tip is included’ (line 3). In line 4, however, he still sought
R’s positive evaluation of his improved text understanding. In fact, this utterance reveals
Dan’s continued uncertainty, which manifests itself in his rising intonation. As a result of
R’s positive response to his question (line 5), Dan provides more evidence of his
enhanced understanding of the passage in question which he mainly achieved on his own,
with only minimal implicit help from R.

**8.7 Cultural references**

One representative text misunderstanding related to C2 references occurred
during the initial DA session. At the beginning of the DA1 text, the speaker expressed his
opinion regarding the differences between French and American breakfasts. This excerpt, which caused comprehension obstacles for all of the learners, is given below:

**Extract 7 (from the DA1 text)**

... j’ai remarqué que les petits déjeuners étaient très riches... donc... sucré-salé alors qu’en France ça serait plutôt sucré ... J’ai découvert aussi le bagel qui est... qui est assez étrange par rapport à ce qu’on peut manger en France parce que c’est assez salé. Alors qu’en France on est habitué plutôt au croissant et au pain au chocolat qui sont sucrés....

... I found that breakfasts were very rich... so ... sweet and salty while in France it would be mostly sweet ...I also discovered bagels which are kind of strange (weird) compared to what you eat in France because they’re pretty salty. In France people are used to eating croissants and pain au chocolat which are sweet...

It should be pointed out that the learners experienced various common difficulties while listening and then recalling this passage. For example, they all failed to recognize the aural form of the word *le bagel* (bagel) pronounced by the speaker as [ba'gœl], or they heard correctly the adjective *étrange* but understood it as ‘foreign’ and not as the intended ‘weird’ or ‘bizarre’. However, among other problems the most salient was associated with a cultural reference. While contrasting French and American breakfasts, the speaker drew a clear distinction between the two: the French breakfast is mostly sweet, whereas the American breakfast is both salty and sweet. The following excerpt from Chris’s independent recall of this passage demonstrates his confusion regarding the speaker’s point and his phonological misrecognition of the word ‘bagel’:

**Excerpt 6 from Chris independent recall (DA1-IP):**

… he too was contrasting the food … and he was making difference between... hum ...salty and sugar ... sugary and ... I think he said that there were... in America there were concentrated sugar... and then ...
didn’t understand that part very well, he said something bagode … I didn’t understand…

Protocol 47, taken from Chris’s DA1-MP session, reveals his bewilderment regarding breakfast’s ‘sugary-salty’ property, a point made by the speaker.

**Protocol 47 Chris**

1. C: yeah… I understand that he is kind of getting at salty-sugary…
2. but don’t know why... I don’t … I don’t even think of breakfast being sugary
3. or salty… I think of … it’s more about food involvement...
4. R: yeah… but he is kind of... he is contrasting this thing...
5. here [in the US] it’s salty and in France it’s sweet... c’est sucré et ici c’est sucré-salé
6. so it can be sucré... it can be salé but mostly ...it’s sucré-salé
7. and in France it’s sucré ... that’s his point....

It should be first noted here that Chris’s independent recall (see Excerpt 6) and Protocol 47 demonstrate that he was able to pick up the words sucré and salé which were quite important for understanding the speaker’s point concerning the differences between American and French breakfasts (it was not the case for all learners, especially during the independent recall of the DA1 text). However, the recognition of these words was not enough to understand the passage in question and successful comprehension was undermined by the lack of cultural knowledge.

Considering the above protocol, it appears that Chris’s puzzlement concerning the speaker’s point stems from his own conceptual understanding of breakfast, which seemingly conflicts with the speaker’s point of view. Evidence for this analysis is found in lines 2 and 3 in which Chris explicitly seems to be confronted with this new information and overtly states that the speaker’s view is unexpected for him. In order to move Chris’s text comprehension forward, R then intervenes with explicit assistance in
the form of an explanation regarding the cultural reference mentioned by the speaker (lines 4-7).

8.8 Conclusion

The aim of the present chapter was to address the aforementioned concerns articulated in L2 listening research and to add to the body of knowledge on L2 listening processes by implementing a DA-based approach to listening assessment. The chapter also illustrates how listening comprehension can be diagnosed and further development promoted through DA within the ZPD.

The results of the qualitative analysis of both mediated and independent recalls presented here provide deeper insight into tendencies underlying the processes involved in listening comprehension and into the diagnosis of developmental paths followed by learners. A number of factors influencing listening processes were ascertained through DA, which appears to be able to generate more accurate and detailed information about the learners’ listening ability. It was demonstrated that the frequency and level of explicitness in the mediation appeared to be tightly linked to the severity of problems and level of proficiency, since some learners were more proficient than others (e.g. see Chris’s data in 8.4.1 and Michel’s data in 8.4.2).

The results provide empirical evidence of how poorly developed bottom-up and top-down knowledge, especially of L2 phonology, did not allow the learners to interact meaningfully with authentic spoken texts. The results thus demonstrate that L2 phonology has significant influence on listening comprehension, at least for learners at
the intermediate level. Additionally, the results show that not only lexis but also grammar (mostly tense recognition) contribute substantially to L2 listening comprehension ability. Unknown cultural references too were found (as expected) to be a vital component influencing text misinterpretation.

DA intervention in the form of mediation was shown to play an important role in diagnosing learners’ problem areas. The chapter provides a fair number of examples demonstrating that in many cases the learners were unable to display their L2 knowledge during the independent stage conducted non-dynamically but could overcome the identified problem areas after having received implicit or explicit assistance offered by the mediator.

From the perspective of SCT, the results can be interpreted as follows. While the learners cannot yet fully understand an authentic text independently and, therefore, still require mediation, their responsiveness to assistance demonstrates that their capacity to comprehend such texts is in the process of ripening. In other words, it is argued here that the learners are ready to respond effectively to appropriate instruction, but the instruction must take into account their developmental differences. Thus, even though the learners were enrolled in the same level course (i.e., intermediate French course, fourth semester), they were clearly not at the same level of ability with regard to comprehending authentic spoken French. This crucial fact, along with knowledge of the source of the problems unique to each learner was only brought to light as a result of DA-based mediated interactions.

The SCT perspective adapted here allows us to look at L2 listening microgenetic development and its diagnostics from a new perspective, rarely attempted to date in L2
research. The emphasis here is on two crucial SCT concepts, i.e. mediation (or mediational strategies) and the ZPD as well as their role in understanding the language developmental process. Using microgenetic analysis and the methodology of DA, it was ascertained that the learners’ ability to understand authentic spoken French independently was quite limited. However, when engaged in mediational dialogue, the learners showcased their responsiveness to assistance, offered explicitly or implicitly, and were able to achieve a better understanding of texts. In the context of SCT, this means that the learners were engaged in an activity, i.e. listening to L2 authentic discourse, which was within their ZPDs.
Chapter 9

Conclusion

9.1 Introduction

The research idea for this dissertation stems from my long-standing interest in L2 listening comprehension and from my dissatisfaction with current listening practices in language pedagogy. My personal experience in both learning French and English as foreign languages and teaching L2 French in Russian and American university contexts has highlighted for me the difficulties that adult learners at all levels of language proficiency have in understanding aural texts, specifically pedagogically “non-doctored” texts involving authentic spoken discourse produced by native speakers. This dissertation was thus motivated by both my personal and pedagogical concerns that had propelled me to undertake this study. These concerns sought to enlarge our understanding of difficulties that impede successful listening comprehension of L2 learners and in so doing to enhance current approaches to listening instruction.

The purpose of this study was to explore the integration of DA methodological principles into one of the under-researched fields of L2 learning and instruction, i.e. listening comprehension. More precisely, the study investigated the effects of interactionist DA on the development of listening ability among American university intermediate students learning French as a second language. Although Dynamic Assessment is gaining increased attention in applied linguistics all over the world,
empirically grounded research scrutinizing the effects of DA on L2 acquisitional processes still remains scarce (see chapter 4). The present study adds a new dimension to L2 DA research as well as to L2 research and pedagogy by applying an innovative approach, i.e. DA, to investigate, diagnose, and promote listening development in L2 contexts.

This final chapter offers the summary of the findings obtained in this study (9.2). Next, it discusses the contributions and implications the findings in this study make to L2 research (9.3) and pedagogy (9.4), it outlines limitations of the present study and how these limitations may be addressed in future L2 listening research (9.5). The chapter concludes with a discussion of potential directions for future L2 research exploring DA procedures (9.6). Finally, the chapter provides concluding remarks (9.7).

**9.2 Summary of the findings**

This dissertation provides a close analysis of L2 listening processes and diagnostics associated with the development of listening ability among intermediate university learners’ of L2 French. To diagnose and explore L2 listening development, the study applied theoretical and methodological principles of DA, informed by Vygotsky’s sociocultural theory of cognitive development (chapters 3 and 4). Following DA methodology that prescribes mediation during an assessment procedure, the learners were engaged in a learning activity oriented towards their ZPD. This is crucial since SCT-based DA is unthinkable and improbable without a ZPD-anchored learning activity, as opposed to other forms of assessments that include the provision of immediate feedback
(e.g. formative assessment). As documented in chapters 6, 7 and 8, the learners’ ability to understand authentic spoken French independently was quite limited. However, when engaged in mediational dialogue, the learners showcased their responsiveness to assistance, offered explicitly or implicitly, depending on the severity of problems experienced, and were able to achieve a better understanding of the texts. In the context of SCT, this means that the learners were engaged in an activity, i.e. listening to L2 authentic discourse, which was within their ZPD.

The results provide insights into a two-month L2 listening microgenesis. The study included three stages: the pretest, the enrichment program (EP) and the post-test (see chapter 5). The pre-test and the post-test stages involved non-dynamic assessments (NDA), dynamic assessments (DA) and transfer assessments (TA). During the pretest- and post-test assessment sessions, the learners were asked to listen to eight increasingly complex authentic texts in French and to produce an oral recall in their L1, i.e. English. Each session normally was comprised of two phases, i.e. (1) independent performance (IP) and (2) mediated performance (except for NDA1 and NDA2 which included only the first phase). This first phase proceeded non-dynamically, with participants listening to the text twice and recalling it independently. During the second phase, carried out dynamically, participants listened to the same text as many times as they needed and were offered mediation geared to the problems exhibited by the learners.

Exploration of listening development was addressed primarily through the application of microgenetic analysis, permitting the tracking of development qualitatively and longitudinally. The study has also employed propositional analysis (idea units counting) as a quantitative methodological instrument for determining the extent of text
comprehension. The use of microgenetic analysis in tandem with a quantitative measure provided insights into examination and interpretation of learners’ independent and mediated listening performance.

To reiterate, the goal of Chapter 6 and Chapter 7 is to answer the first research question (see 1.2.1). That is, the chapters examine quantitatively and qualitatively the extent to which a DA procedure improves the development of listening ability.

The quantitative analysis of independent performance reported in Chapter 6 demonstrates that the development of learners’ listening ability was not linear but rather uneven and “zigzagged”, in Vygotsky’s (1997a) terms. Furthermore, the findings from independent recalls corroborate Vygotsky’s argument regarding the conflicting nature of development that inevitably involves progression and regression.

Based on the IU analysis, the quantitative information (mean scores) revealed that the production of acceptable IUs passed through a series of increased and decreased number of IUs recalled and was accompanied by increasing variability (i.e., standard deviation), indicating that learners’ microgenetic developmental gains were not uniform but rather idiosyncratic. The number of IUs produced in TA1-IP, NDA2-IP, DA2-IP and TA2-IP portions of the sessions demonstrate an increase in the IU production as compared to the NDA1, DA1-IP, conducted prior to any mediated portions of assessment sessions. Therefore, the increased IU production is mainly attributed to mediation offered during DA1-MP, TA1-MP, enrichment program, and NDA2-MP, DA2-MP and TA2-MP. The scores obtained during the TA3-IP session demonstrate a slight decrease in the production of acceptable IUs as compared to TA2-IP; whereas the scores of TA4-IP session exhibit an abrupt drop in IUs recalled independently. This decrease in IU scores
is attributed to the shift in text genre that occurred during the last two assessments employed in the study, i.e. the TA-3 and TA4 sessions were based on the texts that differed in genre and format from the texts used in previous sessions.

Thus, the examination of independent recalls generally suggests that although there is evidence of listening development including transfer tasks (e.g. TA1 and TA2), there is a limit on what can be achieved in 9 weeks. In addition, these findings show that language development can take progressive as well as regressive trajectories. Arguably, the findings from independent recalls empirically confirm Vygotsky’s (1997a) claim that regression is an inherent feature of development and mirror Vygotsky’s double-sided view of development as an evolutionary as well as revolutionary process. It was revealed, however, that the regressive and progressive trajectories observed throughout the study were found to be persistent not only in independent but also in mediated listening performance.

Several research questions are addressed in Chapter 7 (see 1.2.1). In addition to the first, this chapter also answers the second and the third research questions. That is, the second question is concerned with the identification of the DA-based mediational strategies that enhance the development of listening abilities of L2 intermediate learners. The chapter presents the menu of the most effective mediational strategies that were outlined on the basis of a close qualitative analysis that included all DA-based sessions (see 7.3 and 9.4).

The third research question addresses learners’ responsiveness to mediation occurred during the DA and TA sessions. Learners’ engagement in mediated interactions, documented in Chapter 7, demonstrate that there was movement within the ZPD for all of
the learners. The qualitative analysis of mediated performance has shown that learners’ response to mediation took the form of regressive and progressive trajectories. In fact, generally the learners tended to produce more progressive than regressive moves, specifically during the final three sessions, i.e. TA2, TA3 and TA4. This finding is important in several ways. First, the frequency of regressive and progressive responses to mediation provides insights into the emergence of listening ability to understand L2 authentic spoken discourse, captured longitudinally through the lens of the microgenetic analytical framework. Second, the increasing number of progressive responses points to the fact that even though learners’ mediated performance was not always successful in terms of producing the appropriate answer, as manifested in regressive moves, their listening ability was continuously developing.

The final research question dealt with the diagnostic information obtained through a DA procedure. The investigation of mediated listening performance also allowed for diagnosing several factors that impede L2 listening comprehension at the intermediate level of language proficiency. As evident from the qualitative analysis presented in Chapter 8, the mediational phases of the DA and TA sessions, as opposed to non-mediated phases and NDA sessions, offered a fuller picture of the difficulties experienced by the participants while listening to the texts. This crucial fact, along with knowledge of the source of the problems unique to each learner, was only brought to light as a result of DA methodology. It was ascertained that all learners had difficulties understanding authentic spoken language. The problem areas that impeded successful listening performance resided in all aspects of language learning, i.e. lexis, grammar, phonology and cultural knowledge. One of the important findings of this study revealed through the
diagnostic analysis is that at this level of experience with authentic spoken French, grammatical and phonological problems also present a noticeable challenge for the intermediate learners of the language, despite the arguments advanced in the previous listening research. Moreover, the diagnostic analysis demonstrated that for these learners L2 phonology constituted the biggest challenge in text comprehension since poorly developed L2 phonology did not allow intermediate listeners to recognize previously acquired words and compelled them to confuse L2 and L1 sounds. This finding supports the results of Ableeva’s (2008) pilot study where all twelve participants, intermediate L2 French learners, exhibited comprehension problems related to L2 phonology.

Overall, the findings of this study lead to the conclusion that listening comprehension of authentic spoken discourse is a highly challenging activity for L2 intermediate learners, requiring a complex interplay of bottom-up and top-down knowledge, and therefore should warrant particular attention in language instruction.

9.3 Implications of the findings for L2 research

This dissertation makes several contributions to the under-researched areas of three academic fields of inquiry, i.e. SCT-based L2 research, L2 DA research and L2 listening research. The findings obtained in this dissertation also contribute to the field of L2 pedagogy by providing empirically-grounded insights into acquisitional processes that can inform the methodology for teaching L2 listening comprehension.
9.3.1 Implications for SCT-based L2 research

The empirical data collected enables this study to amplify our knowledge of the ZPD, one of the fundamental concepts advanced by Vygotsky’s theory. First of all, this dissertation adds to the body of research on L2 regression, in particular to L2 research informed by SCT (e.g. Lantolf and Aljaafreh, 1995). The implementation of a longitudinal study allowed for more insights into the regressive and progressive processes that accompany the development of L2 listening ability within the ZPD. In this sense, the findings of the study provide additional empirical support for Vygotsky’s claim regarding evolutionary and revolutionary nature of development. Second, the dissertation contributes to those SCT-based studies that attempt to investigate the structure of the ZPD (e.g. Shopina, 2003). That is, the regressive and progressive moves produced by the learners during the mediated portions of the sessions are considered here to be components of the listening ZPD (chapter 7). Third, one of the central findings of this study is that during the last assessment sessions the learners produced more progressive than regressive moves. Thus, this finding makes contribution to a better understanding of the process that underlies the transformation of the Zone of Proximal Development into the Zone of Actual Development. It is argued here that the increased occurrence of progressive moves sheds light on the process of transformation of a listening ZPD into the zone of actual development. Finally, the study also demonstrates the ability of microgenetic analysis to capture L2 developmental processes and provides evidence for the feasibility of microgenetic methodology in L2 research (in addition to the previous
research that explored this fundamental SCT method of inquiry, e.g. Kinginger & Belz, 2005; Vyatkina, 2007).

9.3.2 Implications for DA-based L2 research

This dissertation makes two important contributions to DA L2 research informed by SCT. Given the scarcity of DA empirical research in L2 contexts, currently there are two areas that deserve particular scholarly attention, i.e. the design of DA studies and the provision of mediation during a DA procedure.

The research design of this study extends the use of transfer sessions in order to track the development of listening ability over time. As discussed in Chapter 5, the ‘multiple transfers’ approach in DA psychological research was introduced by Brown and her colleagues (e.g. Brown & Ferrara, 1985, Campione, Brown, Ferrara, & Bryant, 1984). This group of researchers proposed to conduct three transfer sessions after the post stage, i.e. ‘near transfer’, ‘far transfer’ and ‘very far transfer’. In contrast to Brown et al. (1984) and Poehner’s (2005) research design that included only two transfer assessments at the end of his DA study, the present investigation devised four transfer tasks that appeared at the end of pre-test and post-test stages. That is, the study involved one ‘very near transfer’ session (TA1), one ‘near transfer’ session (TA2), one ‘far transfer session (TA3) and one ‘very far transfer’ session (TA4). The introduction of ‘very near transfer’ session at the end of the pre-test stage allowed the present study to track the immediate changes in the learners’ listening development and in so doing helped to devise the enrichment program in a more appropriate way.
Another contribution that this study makes with regard to DA methodology concerns the delivery of mediation. As noted by the researchers working within the psychological DA framework, the provision of mediation is one of the most intimidating aspects of DA application in practice (Haywood & Lidz, 2007). This is not surprising since empirical research investigating effective mediation still remains sparse. To the best of my knowledge, this topic has not received much attention in general DA research (Lidz, 1991) as well as in L2 DA research (Aljaafreh & Lantolf, 1994; Poehner, 2005), and is nearly unresearched from an empirical perspective. Thus, the inventory of mediational strategies outlined in this study extends our understanding of how to offer DA-based mediation and breaks new ground for the integration of DA procedures into classroom assessment practices, in particular listening assessment.

9.3.3 Implications for L2 listening research

The application of DA to listening assessment enabled this study to address several concerns articulated in L2 listening research. As discussed in more detail in Chapter 2, recent research highlights the intense need to create diagnostic tests to assess L2 listening comprehension (e.g. Buck, 2003; Alderson, 2005) and to conduct more qualitative studies exploring the processes of listening in second language learning (e.g. Vandergrift, 2007; Field, 2008). It is in these particular areas that this dissertation is able to contribute to L2 listening research. First, it demonstrates the ability of DA to serve as a diagnostic tool when studying the source of the problems experienced by learners during the assessment procedure. Using SCT-based methodology which calls for mediated
interactions as a source of development, the study revealed an array of difficulties that impede successful listening comprehension of L2 French intermediate university learners. Moreover, DA was able to identify not only those areas where learners had problems (phonology, lexicon, grammar, cultural knowledge) but also to bring to the surface those abilities that were in the process of developing.

Another contribution of this dissertation to L2 listening research is that the use of DA methodology enabled a close examination of the processes occurring during L2 comprehension. The advantage of this approach is rooted in mediated teacher-learner interactions and in microgenetic method that provide deeper insights into how individuals’ abilities change and develop over time when used together.

9.4 Implications of the findings for L2 pedagogy

9.4.1 Teaching method

The study outlines a new approach to assessing and teaching listening comprehension grounded in empirical research. The approach generated an inventory of mediational strategies that, according to the results, have proven to be useful in diagnosing the source of the problems experienced by L2 learners during the listening process.

As indicated earlier, the analyses of data provide important insights into the difficulties related to the learners’ emerging ability to comprehend authentic spoken discourse. These insights can inform L2 listening instruction by pointing to the areas that
need to be improved or need to be carefully developed. For example, the data clearly shows that listening comprehension of intermediate learners is affected by instability of L2 linguistic and cultural knowledge. One of the central findings of the study is that listening comprehension is heavily affected by underdeveloped L2 phonology. Support for this claim stems from the results of diagnostic analysis of mediator-learner interactions during the assessment procedure. It should be noted here that the learners were enrolled in a language program that did not include a course in French phonetics and pronunciation. Thus, these findings have direct implications for L2 pedagogy. That is, it might be beneficial for L2 college learners, enrolled in basic language courses, to be exposed to an instruction that explicitly introduces L2 phonetics and the basic features of L2 spoken discourse. It would be also critical to introduce a special course in L2 phonetics at the intermediate level.

With regard to beginning language courses, it would be necessary for learners to have extensive exposure to and practice with high frequency features of French phonology, such as liaison and schwa. The courses should also include exposure to and practice with important lexical as well as grammatical features of the language, including the use of *on* instead of *nous*, the most frequent pause fillers such as *euh, du coup, ben, alors, donc*, the non-use of *ne* in negation etc. The variety of structural features of spoken French should increase at the intermediate level, where students should have the opportunity to extend their knowledge of the French phonological system and to listen to authentic aural texts along with practical phonetic exercises.

The diagnostic analyses also demonstrated that recognition of certain grammatical items (i.e. tenses) was a persistent problem throughout the assessment sessions. The
learners tended not to recognize the verbs used in the present conditional or to confuse the present conditional with the imperfect. In this regard, the problems related to recognition of grammatical points suggest that comprehension of aural texts may benefit from the more frequent exposure to such tenses as the present/past conditionals. That is, this finding suggests that French grammar instruction which explicitly and repeatedly involves the discussions of the functional use of conditional tenses and their phonological differences from the imperfect may have a positive impact on listening comprehension of L2 intermediate learners.

9.4.2 Pedagogical materials for L2 listening

The study also contributes to the L2 pedagogy by proposing a collection of listening materials that can be potentially used for developing and improving listening comprehension abilities of L2 French learners of different proficiency levels. As noted in Chapter 5, the collection of listening materials involved interviews with French native speakers that were audio- and video-recorded. During the interviews, nine native speakers of French were asked to answer a series of questions organized around the following topics: House, Family, Food, Education, Cultural and sports activities, Cinema, Political life, Technology. The collection of listening materials includes 15 hours of recordings, of which only six small segments based on Food were used in the present study.

The audio- and video-materials can serve as the basis for the creation of a textbook on listening comprehension guided by DA theoretical principles. It is hoped that
this textbook will represent valuable instructional materials for developing listening ability of L2 French learners.

9.5 Limitations of the present study and directions for future L2 listening and L2 DA research

There are several limitations that need to be acknowledged and addressed with respect to the present study. The limitations described below may also be regarded as orientation for potential future L2 DA research and/or L2 listening.

The first limitation concerns the length of the study. Despite the longitudinal nature of the present study, the development of learners’ listening ability was tracked only within two-month period of time. The collection of data ended when the learners barely began to showcase some improvements in listening comprehension, as demonstrated by the number of counts related to such responsive moves as Decipher a pattern correctly (Chapter 7). Accordingly, further investigation that would track development of listening ability over longer periods would offer more insights and refine our understanding of L2 listening comprehension processes.

The second limitation has to do with the extent to which the findings can be generalized to intermediate university L2 learners. The number of learners participating in this study is too limited for broad generalizations. However, the results of the present study confirm the findings of the pilot study (e.g. see Ableeva, 2008), i.e. both studies obtained similar results regarding several key findings (e.g. in both studies the learners experienced problems related to L2 phonology and recognition of lexical items).
Therefore, further empirical evaluations are needed to replicate the findings in different contexts and possibly at different levels of language proficiency. The future investigations can potentially replicate the design of the present study but should take into account of the third limitation discussed in the next paragraph.

The third limitation relates to the transfer tasks. The texts used in the TA3 and specifically in the TA4 sessions caused severe comprehension difficulties for the learners when recalled independently (Chapter 6). The decrease in the number of IUs recalled during TA3-IP and TA4-IP point to the fact that the texts selected to monitor the extent to which the learners could extend their enhanced listening ability were too difficult and were almost outside of the learners’ listening potential developed in the previous sessions. A dramatic drop of IU production in TA4-IP indicating learners’ inability to engage in the task leads to the following suggestion. The transfer tasks should be designed in a more careful manner. In order to calibrate transfer assessments to the leaner’s microgenetic gains, it would perhaps be more appropriate to design transfer tasks in terms of text selection after the first NDA and DA sessions and/or after the enrichment program rather than a priori, as was done in the present study.

Finally, more rigorous diagnostic qualitative analyses of L2 listening processes via DA should be performed. This dissertation has provided diagnostic insights only into the processes related to listening comprehension of intermediate university students learning L2 French. To inform listening instruction, it would be necessary to conduct a range of empirical studies in order to reveal problem areas that cause comprehension difficulties of L2 learners studying various languages and at different proficiency levels. The focus of these studies should be on the degree to which each of the components of
listening comprehension has an influence. That is, the studies could potentially investigate the weight of regressive and progressive components in listening processes at various level of language proficiency.

With regard to listening research, one factor that could be considered in future studies is the role of non-verbal behavior, including gesture, facial expressions, body posture, etc. This factor was left unexplored in the present study; however, the data obtained include several instances that demonstrate how the gestures used by the native speakers in the video influenced the comprehension of the learners. Thus, future studies offering empirical insights into the role that non-verbal behavior plays in L2 listening would also enhance our understanding of the processes involved in L2 aural text comprehension.

Another related and potentially productive venue for future listening research is the use of authentic aural texts from various genres. That is, the decrease of learners’ IU production in the TA3-IP and TA4-IP sessions is attributed to the abrupt switch to the texts involving a different genre and format. Therefore, the inclusion of L2 authentic aural texts of different genres should be an important component of a listening comprehension course since it should increase learners’ awareness of the relevant features of different genres that are likely to impact on listening comprehension.
9.6 Directions for future L2 DA research

9.6.1 Group DA: problematizing the issue

Group DA (G-DA) is one of the new directions that recent L2 DA research has begun to explore. Poehner (2009) aptly points out that the DA framework has exhibited a strong preference for the implementation of DA procedures in one-on-one format. He states that a dyadic model, however, is not the only option for DA applications and can be extended to a group model. To base his argument in favor of G-DA, Poehner notes that “Vygotsky (1998) describes the ZPD as “the optimum time for teaching both the group and each individual” (p. 204) but he does not elaborate the group ZPD in his published work” (ibid., p. 473). Poehner (2009:477) compares two research configurations of DA, i.e. G-DA and one-on-one DA, and states that “group based and one-on-one DA procedures follow the same general principle of offering learners mediation to help them co-construct a ZPD, but they differ in that G-DA must also take account of the group’s ZPD”. To implement G-DA in a classroom setting, Poehner suggests language that teachers “engage the group in an activity that no individual is able to complete”.

73 In relation to this quote from Vygotsky (1998) one important remark should be made here. Unfortunately, the translation of the quote in question is partially incorrect. In fact, instead of the word group, Vygotsky uses the adjective ‘massive’. The word-for-word translation of the quote from Russian into English is as follows: "the optimum time (times - plural in Russian) for teaching of massive as well as each individual child is established at each age by the zone of his proximal development.”

Here is the original quote as it appears in Russian: “No и сейчас нам должно быть ясно, что, поскольку обучение опирается на несозревшие, но созревающие процессы, а вся область этих процессов охватывается зоной ближайшего развития ребенка, оптимальные сроки обучения как для массового, так и для каждого отдельного ребенка устанавливаются в каждом возрасте зоной его ближайшего развития” (Vygotsky, 1984:266).

The translation of the quote as it appears in the collected works of Vygotsky is as follows: “But now it must be clear to us that since teaching depends on immature, but maturing processes and the whole area of these processes is encompassed by the zone of proximal development of the child, the optimum time for teaching both the group and each individual child is established at each age by the zone of their proximal development” (Vygotsky, 1998:204).
independently but for which all members require mediation, albeit at different levels and
different quantity” (ibid., p. 477).

With regard to the use of the ZPD in classroom settings, Poehner (2009) touches
upon the most problematic and controversial issue that has been discussed over the
decades within the SCT framework. Russian SCT-oriented educators have developed a
number of pedagogical paradigms termed Developmental Education (развивающее
обучение), e.g. A.V. Zankov; D.B. El’konin and V.V. Davydov; P.Ya. Gal’perin.
Despite several internal differences, these paradigms are built upon the same educational
SCT principles, and seek to forefront development of learners’ intellectual abilities.
Following Vygotsky, the authors of the Developmental Education programs argue that
school education should be oriented towards learners’ ZPD. In this regard, Shopina
(2003) emphasizes another factor that presents considerable difficulty for the integration
of the ZPD into group models. In her view, many SCT researchers believe that the
application of this concept to group settings contradicts Vygotsky’s understanding of the
ZPD, since Vygotsky himself used it only as an individual indicator of child’s
development. It should be kept in mind though that Vygotsky’s perspective on the ZPD
changed over time since its first introduction in 1932-1934 (see chapter 3). But the fact
that Vygotsky mentioned the importance of the ZPD application to a massive schooling
in The problem of age, one of his last writings, might mean that the concept can operate
with less than massive configurations of learners, e.g. in classroom contexts; in addition,
the concept can appropriately be expanded beyond Vygotsky’s original way of
conceiving it and this is what empirically-grounded research could do for a theory
(Lantolf, personal communication: February, 2010). Therefore, even though Vygotsky
never mentioned a group ZPD specifically, then G-DA research could be viewed as an extension or elaboration of SCT, which is important to any theory (as discussed with Lantolf and Poehner, personal communication: February, 2010). Thus, group DA research can be regarded as one of the imperative research directions that will enable L2 SCT advocates to identify effective G-DA methodology, create instructional materials and in so doing to integrate DA to L2 classroom contexts.

In fact, Poehner (2009) reports on a pedagogical G-DA intervention carried out on substantive-modifier concord in Spanish with a class of fourth grade learners, 9-10 years of age, at a primary school in the US. During the lesson the learners were involved in an activity that was in their ZPD: the in-class activity was focused on marking substantive-modifier concord, a notoriously difficult grammar concept L1 English speakers learning a Romance language. That is, the learners were asked to describe animals using adjectives and while completing the task they “required decreasing levels of support, a strong indication that all were benefiting from the shifting mediation Tracy provided to individual learners” (Poehner, 2009:487).

I generally agree with Poehner (2009: 471) that “organizing classroom activity in this way enables teachers to explore and promote the group's ZPD while also supporting the development of individual learners”. In my view, however, it would be difficult to implement DA methodology in L2 classrooms without greater understanding of the ZPD components related to second language learning. This venue of DA research that could potently enhance G-DA is addressed in the next section.
9.6.2 ZPD-based research in L2 educational contexts

With regard to the ZPD, Shopina (2003) remarks that notwithstanding numerous benefits of Developmental Education models, created in Russia, one of the reasons for which they did not gain popularity among school teachers is that to date, the ZPD still remains a scientific notion and a metaphor rather than a real mechanism involved in the creation of educational programs. Many SCT researchers caution that despite the educational significance of the ZPD, this concept is still under-researched and therefore, cannot be used as an effective pedagogical tool (e.g. Shopina, 2002; Kravtsov, Berejkovskaya, Kravstova, 1996). As explained by Shopina (2003), although Vygotsky’s concept of the ZPD has always been attractive to researchers and has been explored by many generations of SCT- proponents, a number of research problems related to this concept still remain unresolved. For example, Shopina emphasizes that currently there is a need for studies investigating the structure of the ZPD, the extension of its boundaries, its transformation into the zone of actual development. This line of research seems relevant to DA field, including L2 DA, and merits further investigation.

Another yet related direction for future L2 DA studies is identification of learners’ moves in response to mediation while learning within the ZPD. As discussed earlier, the present study has shed some light on microgenetic movement in the learners’ ZPD. However, the inventory of learners’ moves, outlined here through the DA methodology, encompasses only the components of the ZPD related to the L2 listening ability of intermediate university students. Thus, there is much work to be done with respect to the exploration of the ZPD components concerning all four language skills at all levels of
proficiency. This research direction is potentially very fruitful as it will help us to better understand the structure of the ZPD related to L2 acquisitional processes as well as to outline how to effectively transform the ZPD into the zone of actual development.

In order to expand the use of DA in L2 educational contexts, identification of mediational strategies can be also a productive venue for future research. The inventory of mediational strategies outlined in this study concerns only listening instruction. This inventory could be refined and made more robust on the grounds of replication studies. Additionally, it would be necessary to conduct DA-based studies that would outline effective mediation for teaching/assessing various aspects and abilities and in this way to provide guidelines for the implementation of G-DA in L2 educational settings. This should certainly be the subject of later L2 DA studies. My own view on this research direction is that the implementation of G-DA in various settings would be facilitated and benefit from the results of one-on-one L2 studies grounded in interactionist DA. These studies should aim to identify the inventory of learners’ moves in the ZPD as well as the most effective mediational strategies used to teach/assess language abilities. An example of this kind of benefit offered by an interactionist DA study is discussed in the next section. The section also outlines another potentially fruitful direction of L2 DA research.

**9.6.3 Computerized DA**

One of the new research orientations, computerized L2 DA (C-DA), is currently on the rise. A team of L2 researchers from the Pennsylvania State University (United States) is working on a three-year research project *Computerized Dynamic Assessment of*
Language Proficiency in French, Russian and Chinese, funded by the U.S. Department of Education. More specifically, the project is grounded in the interventionist DA (see chapter 4 for description) and investigates the enhancement of computerized listening and reading assessment from a Vygotskian perspective.

As an outgrowth of the present study, the methodology adopted for the ongoing C-DA project is based on the inventory of mediational strategies outlined in this DA investigation (chapter 7). That is, several of the most effective mediational strategies, distilled empirically by the present study, underlie the C-DA of listening and reading comprehension. Thus, future C-DA research would benefit from the results gathered by empirical one-on-one DA studies, conducted prior to any C-DA. The result obtained in these studies would inform the methodology of L2 teaching from an SCT perspective and create effective instructional materials grounded in Vygotsky’s theory.

9.7 A final comment

One of the major issues that this study has attempted to explore is the feasibility of DA and its integration into such areas as second language acquisition research and L2 instructional practices. The study supports claims concerning the relevance of SCT methodological principles and pedagogical approaches, i.e. DA and concept-based teaching, for second language pedagogy (e.g. Lantolf and Thorne, 2006; Kinginger, 2001; Vyatkina, 2007; Lantolf and Poehner, 2007; Poehner, 2005; Anton, 2009; Kabanova, 1985; Negueruela, 2003). I believe that the integration of key SCT concepts into the field

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74 For more information on this project, visit http://language.la.psu.edu/pages/projects
of language research and pedagogy can create an alternative view of language learning as a developmental process, and afford further opportunities for interdisciplinarity and advancement of academic inquiry within the field of Applied Linguistics.
Appendix A

Informed consent form for social science research (Learners)

Informed Consent Form for Social Science Research
The Pennsylvania State University

Title of Project: Dynamic assessment of listening comprehension among intermediate University French L2 students

Principal Investigator: Rumia Ableeva, Graduate Student
401-S Burrowes Building
University Park, PA 16802
(814) 865-9311; rxa180@psu.edu

Advisor: Dr. J.P. Lantolf,
305 Sparks Buidling,
University Park, PA 16802
(814) 863-7038; jp17@psu.edu

Purpose of the Study: The purpose of this research study is to explore the application of a new approach for assessing listening abilities of students learning French as a foreign language. More specifically, the study investigates the effects of dynamic assessment which is a new technique on developing and improving students’ listening comprehension abilities of intermediate students learning French.

Procedures to be followed: 1) You will be asked to answer 17 questions on the bibliographical/Language questionnaire that provides an insight into participants’ foreign language learning background. 2) Participation in this study will involve three stages consisted of fourteen fifty minute individualized assessment sessions: a) pre-test stage will involve two sessions (one week period); b) the enrichment (tutoring) program will involve eight sessions (four-week period); c) post-test stage will comprise four sessions (two-week period). During each session you will be asked to listen to one text in video or audio format and to recall/summarize the content of these texts orally. In addition, during the enrichment (tutoring) program Rumia Ableeva will provide you with necessary explanations, suggestions in order to better develop and to improve your listening abilities in French. Each session will be audio/video recorded. Please note that by participating in this study you are agreeing to be audio/video recorded. This is strictly for research purposes, as it will enable the principal investigator to better document the sessions (total: fourteen sessions).
**Duration:** 1) It will take about 10 minutes to complete the questionnaire. 2) All fourteen individualized assessment sessions will take place within a seven-week period. Each of the sessions will take fifty minutes. The sessions will be scheduled with the researcher on a weekly basis.

**Statement of Confidentiality:** Only Rumia Ableeva, the principal investigator, will know your identity and will have access to the recordings. All interview recordings will be stored and locked in the researcher’s office, located in 401-S Burrowes building. All digital recordings will be stored in the researcher’s computer, will be protected by a password and participants' ID information will be deleted, instead each participant will be assigned a pseudonym. Please note that:
all recordings will be kept indefinitely because it is expected that they will represent a valuable research contribution to the field of applied linguistics (namely to foreign language teaching/learning) and can be potentially used as research materials with no ID information regarding the participants of this study;
in the event of a publication or presentation of this research, people other than the principal investigator will be provided with the possibility to read or to see certain segments from your assessment sessions. However, no personally identifiable information (your real names, university affiliation) will be shared, and you will be assigned a pseudonym.

**Right to Ask Questions:** You can ask questions regarding this research. Contact Rumia Ableeva at 865-9311 or rx1a180@psu.edu with questions or concerns about this study.

**Payment for participation:** Participation in this research is voluntary and no compensation will be offered to participants. Compensation for participation will come in the form of individualized tutoring sessions. Please note that the participation in this study is not required for FR 201 or FR 202 course and is strictly voluntary. Your course grades, including your final grade, will not be affected. The participation in this study is an extra-opportunity to have more practice in listening comprehension.

**Voluntary Participation:** Your decision to be in this research is voluntary. You can withdraw from the study at any time without any penalty by notifying the principal investigator. If you do withdraw from the study, any previously collected data on you will be destroyed. You do not have to answer any questions you do not want to answer.

You must be 18 years of age or older to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.
You will be given a copy of this form for your records.

_________________________________________________________  ____________________________
Participant Signature                                    Date

_________________________________________________________  ____________________________
Person Obtaining Consent                                  Date
Appendix B

Informed consent form for social science research (Interviewees)

Informed Consent Form for Social Science Research
The Pennsylvania State University

Title of Project: Dynamic assessment of listening comprehension among intermediate University French L2 students

Principal Investigator: Rumia Ableeva, Graduate Student
401-S Burrowes Building
University Park, PA 16802
(814) 865-9311; rxa180@psu.edu

Advisor: Dr. J.P. Lantolf,
305 Sparks Building,
University Park, PA 16802
(814) 863-7038; jp17@psu.edu

Purpose of the Study: The purpose of this research is to explore the application of new approach for assessing listening abilities of students learning a foreign language. For this reason, it is necessary to conduct interviews with French native speakers in order to collect aural authentic texts that afterward will be used for developing and improving listening comprehension abilities of intermediate students learning French.

Procedures to be followed: You will be asked to answer in French a series of questions organized around the following topics: House, Family, Food, Education, Cultural and sports activities, Cinema, Political life, Technology (in total 60 questions). Each interview will be audio and video recorded. Please note that by participating in this study you are agreeing to be audio and video recorded. This is strictly for research purposes, as five segments from these interviews will be selected for assessing and improving listening abilities of intermediate students. In addition, a series of other segments from the interviews recorded for this study may be potentially used in a textbook. Therefore, by participating in this study you are agreeing that a series of segments from your interview can be used for a publication. This is strictly for pedagogical purposes, as it is expected that these interviews will be valuable teaching materials.

Duration/Time: It will take about 4 hours to complete the interview.

Statement of Confidentiality: Only Rumia Ableeva, the principal investigator, will know your identity and will have access to the recordings. All interview recordings will be stored and locked in the researcher’s office, located in 401-S Burrowes building. All digital recordings will be protected by a password. Please note that in the event of a
publication (the recordings will be used in a textbook or a teaching) or presentation of this research, people other than the principal investigator will be provided with the possibility to listen to certain interview segments, however, no personally identifiable information will be shared.

**Right to Ask Questions:** You can ask questions regarding this research. Please contact Rumia Ableeva at (814) 865-9311 or rxa180@psu.edu with questions or concerns about this study.

**Payment for participation:** Participants will be offered compensation for their participation in this study. Each participant will receive 75 (seventy five) US dollars via check while taking part in four hour interview (18.75$ per hour).

**Voluntary Participation:** Your decision to be in this research is voluntary. You can withdraw from this study at any time. You do not have to answer any questions you do not want to answer. If you do withdraw from the study, any previously collected data from you will be destroyed. Refusal to take part in or withdrawing from this study will involve no penalty.

You must be 18 years of age or older to consent to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this form for your records.

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Appendix C

Abbreviations and transcription conventions

I. Abbreviations

R = researcher
DA = dynamic assessment
NDA = non-dynamic assessment
TA = transfer assessment
IU = idea unit
IUs = idea units
IP = independent performance
MP = mediated performance
L 1 = participants’ native language
L 2 = participants’ second (or foreign) language learned at an educational setting
SCT – socio-cultural theory of cognitive development, proposed by
    L.S. Vygotsky

II. Transcription Conventions

* - indicates an error
… - indicates a pause
= indicates no interval between two adjacent utterances, the second occurred
    immediately after the first without overlapping it
Appendix D

Questionnaire 1

Bibliographical/Language Questionnaire

1. Name: _______________________________________________
2. Email address(es):
3. Sex. Male: ___________ Female: ______________
4. Age: ________________
5. What is your place of birth? How long did you live there?
6. Please list any other places where you have lived including the length of time you lived there.
7. When the University is in session, where do you live:
   - At home with your parents
   - In University housing
   - In private housing
8. In what semester of university study are you currently enrolled?
9. Major and minor courses of studies
10. What importance does foreign language study have for you?
11. Please describe your travel experience in general.
13. Why have you enrolled in FR 201 course?
14. What are your expectations for this course?
15. In what ways does this course relate to your future professional life?
16. Please describe your study of French/other languages up to this point. Please include as many details as possible, e.g. your approach to learning the language, the role of the teacher, aspects you consider important for learning a language, etc.
17. Do you have any stories about language learning, living or studying abroad, or interacting with speakers of other languages which you would like to relate here? Please give as many details as possible.
Appendix E

Questionnaire 2

Learners’ L2 listening background

1. How many years did you learn French at school/ at High school?
2. Did you learn French at Penn State University (or other universities) before? How many semesters? What kind of courses did you take?
3. Have you ever been exposed to real French speech (e.g. native speakers, radio/TV programs) before this study? If so, in what contexts?
4. Have you ever listened to authentic texts (e.g. real French radio or TV programs) before? What kind of? If so, in what contexts (classroom, Internet, YV5 on campus, in France)?
5. If you listened/ watch/ to French radio/TV programs in French classrooms before, how often were you exposed to French authentic texts (once, twice etc. a week, a month, a semester)?
Appendix F

Questions for interviews with French native speakers

Interview questions (in French)

I. La maison
   1. Décrivez votre logement, c’est-a-dire ses pièces (a quoi sont-elles destinées), son intérieur (son toit, sa forme, ses couleurs, son jardin).
   2. Quels sont les avantages/inconvénients de votre maison ?
   3. Décrivez une maison typique en France, de votre région.
   4. Comparez une maison typique française à la maison américaine typique.

II. La famille
   1. Que pourriez-vous dire sur votre famille (par ex. sa composition, les professions) ?
   2. Avez-vous beaucoup ou peu de proches parents (cousin/cousines, oncles/tantes etc.) ?
   3. Entretenez-vous des liens étroits avec les membres de votre famille et vos proches parents (p.ex. contacts téléphoniques, des visites, échanges d’emails etc.) ?
   4. Suivant le mode de vie que vous avez maintenant, vous voyez-vous souvent ? Ou seulement à certaines occasions (p.ex. anniversaires, fêtes) où il est de coutumes de les passer ensemble ?
   5. La famille américaine, cela vous change-t-il de la famille française (leurs liens, mode de vie)

III. La cuisine
   1. Dans votre famille, quels sont vos repas quotidiens, de tous les jours ? Quels sont vos plats préférés ? Est-il difficile de les préparer? Quels ingrédients faut-il avoir pour pouvoir les préparer ?
   2. Quelles sont les fêtes, occasions ou vous organisez de grands repas et des festins ?
   3. Qu’est-ce qui caractérise la cuisine de votre région, de France? Quels sont les plats typiques de votre région, de France ? Qu’est-ce qui caractérise la cuisine française, en général ? Que conseillerez-vous comme plats à gouter aux personnes qui ont l’intention de visiter la France, votre région ?
différence ? Les Français, vont-ils souvent aux cafés, restaurants? Si, oui pour quelles raisons?
5. Selon votre mode de vie actuel, est-ce que vous cuisinez vos repas à la façon traditionnelle ou vous consommez ‘fast-food’?

IV. L’éducation
1. Décrivez votre parcours scolaire depuis l’école primaire jusqu’à un établissement supérieur.
2. Que faut-il faire du lycée jusqu’à l’université pour être ingénieur, docteur, professeur de français, d’histoire etc. Expliquez comment obtient-on l’entrée dans une université en France, dans une Grande Ecole. Quelles sont les conditions d’admission ? Vous pouvez parler de votre exemple.
3. Décrivez votre parcours universitaire, les différents cycles que vous avez suivis.
4. D’après vous, les études supérieures sont-elles difficiles, contraignante, sélectives a certains moments ? Quels sont ces moments, donnez des exemples ? Cela dépend-il des filières suivis ?

V. Les loisirs
1. Entre quelles activités partagez-vous votre temps libre ? Quelles sont vos activités (culturelles, sportives) de loisirs préférées ? Sont-elles diverses/nombreuses suivant le temps dont vous disposez ?
2. Comme votre temps de loisirs quotidiens est réduit, que faites-vous d’habitude en rentrant à la maison ?
3. Comment organisez-vous votre loisir pendant la fin de la semaine ?
4. Les vacances qui sont plus longues vous donnent-elles l’occasion de varier vos activités ? Par exemple : voyagez-vous ? Si ce sont des voyages touristiques, quelles sont vos destinations préférées ? Aimez-vous les voyages individuels ou organisés ?

VI. Le cinéma
1. Appréciez-vous le cinéma ? Les films, ou aimez-vous les regarder (au cinéma, chez des amis, à la maison) ?
2. Quelles sont vos préférences quand il s’agit du cinéma ? Aimez-vous le cinéma américain, français, européen ? Ou peut-être vous vous basez sur d’autres critères. Par ex. un film à grands effets, le bon jeu des acteurs, un bon scenario, une bonne mis-en-scène ?
3. Quels sont les films que vous regardez avec le plus d’entrain (films historiques, mélodrames, comédies, films policiers, films d’horreur etc.) ?
4. Selon vous, quelles sont les différences/les ressemblances entre le cinéma français et américain ?

**VII. La technologie**
1. Nous vivons dans l’ère des nouvelles technologies qui facilitent de plus en plus la vie des êtres humains. Etes-vous un consommateur de ces technologies ? Lesquels (par exemple, dans le domaine de telecommunication, transport, électroménager etc.) ?
2. Pouvez-vous donner des exemples de la nouvelle technologie française ?

**VIII. La vie politique**
1. Vous intéressez-vous à la vie politique, (intérieure/internationale, les deux) ? Suivez-vous de près les événements en France, aux Etats-Unis ?
2. Les Français ont une grande habitude de manifester leur mécontentement vis-à-vis de la politique menée par le gouvernement français. Des fois l’expression de ce mécontentement prend la forme de grève. Pensez-vous que c’est un des meilleurs moyens d’atteindre les résultats attendus ?
3. Selon vous, quels sont les grands problèmes sociaux qu’affronte la France actuellement, ces dernières années, p.ex., le chômage, l’économie, le pouvoir d’achat, l’environnement, l’immigration/émigration, l’insécurité etc. ?

**Interview questions (English translation)**

**I. House**
1. Describe your house/apartment, its rooms, its interior, roof, form, colors, garden etc.
2. What are the most important conveniences/inconveniences of your house?
3. Describe a typical French house; a typical house of your region.
4. Compare a typical French house to a typical American house.

**II. Family**
1. What could you say about your family (e.g. its composition, professions)?
2. Do you have many or few relatives (cousins, uncles/aunts etc.)?
3. Do you have a close relationship with your family members, your relatives (phone contacts, visits, email exchanges)?
4. Considering your current life style, do you often see your family? Or you see your family only on certain occasions when family members usually get together (e.g. birthdays, celebrations of any kind)?
5. To what extent is an American family similar to/different from a French family (their relationship, way of life)?

**III. Food**
1. What are the usual/everyday meals in your family? What are your favorite meals? Is it difficult to prepare them? What are the ingredients of your favorite meals?
2. On what occasions do you organize holiday and party meals?
3. In your opinion, what are the characteristics (e.g. popular recipes) of French food? What are the typical recipes of your region? What would you recommend to eat to those who intend to visit France, your region?
4. Compare French and American culinary habits. Do French restaurants differ from American restaurants? In what ways do they differ? Do French people often go to cafes and restaurants? If so, what are the reasons?
5. Considering your current life style, how do you cook/eat? Do you prepare traditional meals or do you consume fast food?

IV. Education
1. Describe your educational experiences (from elementary school to University College).
2. What should one study in high school and college in order to become an engineer, a doctor, an instructor of French etc.? Explain how to get in to a university or a “Grande Ecole”\(^75\) in France. What are the conditions for admission? You may provide an example from your own educational experiences.
3. Describe your university educational experiences, different programs in which you were enrolled.
4. Do you think university studies are difficult, restrictive or selective at times? When exactly? Provide an example. Does it depend on university programs?
5. Are there differences between the French and American educational systems? What are these differences? Are you aware of LMD (licence, 3 years; maitrise, 2 years; doctorat, 3 years), a new system regarding higher education in France?

V. Leisure Activities
1. What are your regular leisure activities? What are your favorite cultural/sports activities? Are they diverse?
2. Since your everyday leisure time is limited, so what do you usually do when you return home?
3. How is your week-end leisure time usually organized?
4. Does a long vacation allow you to vary your leisure activities? For instance: do you travel? If so, what are your favorite destinations? Do you prefer individual or organized trips?

VI. Cinema
1. Do you like the movies? Do you like to watch movies at home, at your friends’ house or in the cinema theatre?

\(^75\) “Grandes Ecoles” are the prestigious institutions of higher education in France, sort of French Ivy League colleges.
2. What are your overall cinematic preferences? Do you like American, French, European etc. cinema? Or do you base your choice on other criteria (e.g. smash hit, outstanding actors’ play, mise-en-scene)?
3. What kind of movies do you like the most (e.g. historical, melodramas, comedies, horror movie etc.)?
4. According to you, what are the similarities and differences between French and American cinema?

VII. Technology
1. We live in an era of new technologies. These technologies facilitate the life of human beings. Are you a consumer of new technologies? What are your favorite technologies (e.g. telecommunication, transports, electronic devices etc.)?
2. Can you provide a couple of examples regarding new French technologies?

VIII. Political life
1. Are you interested in politics (international, domestic, or both)? Do you keep yourself informed of various events in France, in the US?
2. French people are used to demonstrating their discontent about French government politics. This discontent takes the form of riots or strikes from time to time. Do you think it’s the best way to attain the desired results?
3. According to you, what are the most important social problems that France faces today (e.g. health care, unemployment, economics, purchasing power, environment, immigration/emigration, insecurity etc.)?
Appendix G

Transcript of text used in NDA1 session

The speaker Ama (pseudonym); text in video format; text time – 01:40

**Question:** Comparez les coutumes culinaires en France à ceux en Amérique

*Et puis aussi je pense que ... une grande différence c’est... les Américains aiment les choses super-compliquées. Enfin... avec... pas au niveau compliquées dans le sens des gouts et cetera mais par exemple une pizza. Ici les gens aiment les pizzas le plus y a des choses dessus, le mieux c’est, ou le plus il y a des choses dans un sandwich, le mieux c’est. Donc, ils adorent mettre trente milles choses dans un sandwich et ... Alors qu’en France c’est vraiment très simple (laughter). C’est ‘jambon-fromage’ ou ‘tomates-mozzarella’, ou sur une pizza c’est, la plus part des gens que je connais quand on va dans un restaurant et même au niveau des choix qu’on a, c’est heu... ‘Margarita’ ou champignons, jambon... Alors que... ici c’est vraiment ‘ananas, pepperoni – machin’ et ça je... enfin moi j’ai pas été... mais j’aime pas du tout ça parce que je trouve que c’est toujours le plus il y en a, le mieux c’est. Alors que, je pense qu’en France c’est vraiment la mentalité au niveau de... de... de la cuisine, c’est la simplicité donne les choses... enfin rend les choses meilleures, en fait. Donc ça, je pense que c’est une différence.*

Translation of the NDA1 text

**Question:** Compare French and American eating habits.

I think that ... a big difference it’s... Americans like super-complicated things. Well ... with... not complicated in the sense of taste et cetera but for example a pizza. Here people like pizzas ... the more toppings, the better they have things on the top, the better pizza is, or the more things they have in a sandwich, the better is. So, they adore to put thirty thousand things in a sandwich... While in France it’s really simple (laughter). It’s ‘ham-cheese’ or ‘tomatoes-mozzarella’, or on a pizza it’s, most of the people that I know when we go to a restaurant and even speaking of choices that we have, it’s uhm... ‘Margarita’ or mushrooms, ham... While here... it’s really like ‘pineapple, pepperoni and stuff’ and this is ... well I didn’t... but I don’t like it at all because I think that here it’s always the more you have, the better it is. While in France I think the cuisine mentality is about simplicity which finally makes things better. Thus, I think that this is a difference.
Number of Idea Units (main, supportive, details) in the NDA1 text

D1. 1. et puis aussi je pense que /
M(1). 2. une grande différence c’est //
M(1). 3. les Américains aiment les choses super-compliquées /
S1. 4. enfin avec pas au niveau compliquées /
S2. 5. dans le sens des gouts et cetera/
D2. 6. mais par exemple une pizza /
D3. 7. ici les gens aiment les pizzas/
S(3). 8. le plus y a des choses dessus le mieux c’est /
D4. 9. ou le plus il y a des choses dans un sandwich le mieux c’est /
D5. 10. donc ils adorent mettre trente milles choses dans un sandwich et /
M(2). 11. alors qu’en France c’est vraiment très simple /
D6. 12. c’est ‘jambon-fromage’ /
D7. 13. ou ‘tomate-mozzarella’ ou sur une pizza c’est /
D8. 14. la plus part des gens que je connais /
D9. 15. quand on va dans un restaurant
S4. 16. et même au niveau des des choix qu’on a /
D10. 17. c’est ‘Margarita’ou champignons jambon /
D11. 18. alors que ici c’est vraiment /
D12. 19. ‘ananas / pepperoni – machin’ /
D13. 20. et ça je enfin /
D14. 21. moi enfin j’ai pas été élevée là-dedans/
S5. 22. mais j’aime pas du tout ça parce que je trouve que c’est toujours /
S (3). 23. le plus il y en a le mieux c’est /
M(2). 24. alors que je pense qu’en France c’est vraiment la mentalité au niveau de euh/
M(2). 25. de la cuisine c’est la simplicité
S (6). 26. donne les choses /
S. (6) 27. enfin rend les choses meilleures en fait /
D15. 28. donc ça je pense que c’est une différence

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Main IUs -2
Supportive IUs – 6
Details – 15
Total IUs: 23
Appendix H

Transcript of text used in DA1 session

The speaker Nic (pseudonym); text in video format; text time - 01:22

**Question:** Comparez les coutumes culinaires en France à ceux en Amérique.

J’ai remarqué que les petits déjeuners étaient très riches donc, sucré-salé alors qu’en France ça serait plutôt sucré et des céréales, des croissants et cetera. J’ai découvert aussi le bagel qui est... qui est assez étrange par rapport à ce qu’on peut manger en France parce que c’est assez salé. Alors qu’en France on est habitué plutôt au croissant et au pain au chocolat qui sont sucrés. Pour ce qui est du café, pas beaucoup de remarques sauf qu’en France on préférera un petit expresso serré plutôt qu’un grand café dilué. Donc, les Américains sont très habitués à manger... à boire ces grands cafés dilués. Autrement au niveau de la viande j’ai remarqué que c’était beaucoup de volaille, beaucoup de bœuf, très peu de porc et jamais de lapin, jamais de... de canard, jamais des choses un peu plus recherchées. Le bœuf ça sera du steak haché ou beefsteak, ça ira jamais plus loin. Et les légumes sont très manque de goût ... sont très... On a l’impression de manger de l’eau. Ça a pas forcément de goût. Les pâtes aussi sont trop cuites, sont beaucoup trop cuites et ont un aspect un peu farineux. Donc, ça c’est toutes les différences. Autrement ce que je mange ici d’habitude... beaucoup de pizzas, d’hamburgers, de desserts. Euh... ce qui est au niveau des desserts, les gâteaux au chocolat n’ont pas le goût de chocolat, ça a le goût de sucre, un concentré de sucre. C’est les grandes remarques et aussi y a des sodas à volonté, chose qu’on verra jamais en France.

**Translation of the DA1 text**

**Question:** Compare French and American eating habits.

I noticed that breakfasts are rich here, sweet-salted while in France breakfast are mainly sweet and cereals, croissants et cetera. I also discovered bagels which is... which is a bit wired in comparison to what we can eat in France because it is quite salted whereas in France we are rather used to eat a croissant or a ‘pain au chocolate’ which are sweet. Speaking of coffee, no special remarks except one: in France people would prefer a little strong espresso rather then a big mug of diluted coffee. Thus, Americans are used to
eat… to drink these big mugs of diluted coffee. Also, speaking of meat, I noticed that it was a lot of poultry, a lot of beef, just a bit of pork and it was never rabbit, never duck, never something a bit fancy. If it’s about beef, it’s about a beef burger or a beefsteak, it doesn’t go further… and vegetables don’t have any taste… they are… I have the impression that I eat water. They don’t have any taste. Pasta is also overcooked, really overcooked and is a bit floury. Thus, those are differences, otherwise what I always eat here… a lot of pizzas, of hamburgers, of desserts. Uhm, speaking of desserts, chocolate cakes don’t have chocolate taste, they are sugary, it’s rather a concentration of sugar. These are big remarks and also there are a lot of sodas here, a thing that you will never see in France.

**Number of Idea Units (main, supportive, details) in the DA1 text**

M1. 1. autrement j’ai remarqué que les petits déjeuners étaient très riches donc sucré-salé/
M2. 2. alors qu’en France ça serait plutôt sucré/
S1 3. et des céréales des croissants et cetera/
S2. 4. j’ai découvert aussi le bagel qui est/
D1. 5. qui est assez étrange par rapport
D2. 6. à ce qu’on peut manger en France parce que c’est assez salé
D3. 7. alors qu’en France
D4. 8. on est habitué plutôt au croissant et au pain au chocolat qui sont sucrés/
M3 10. pour ce qui est du café
D5. 11. pas beaucoup de remarques
M3 12. sauf qu’en France on préférera le petit expresso serré/
M3 13. plutôt qu’un grand café dilué/
D6. 14. donc les Américains sont très habitués à manger à boire ces grands cafés dilués/
M4 15. autrement au niveau de la viande j’ai remarqué que c’était
M4 16. beaucoup de volaille et beaucoup de bœuf/
S4 17. très peu de porc
S5 18. et jamais de lapin jamais de de canard
S6 19. jamais de choses un peu plus recherchées
D7 20. le bœuf ça sera du steak haché
D8 21. ou un beefsteak/
D9. 22. ça ira jamais plus loin/
M5 23. et les légumes sont très manquent de gout/
D10 24. sont très/
S7 25. on a l’impression de manger de l’eau/
D11 26. ça a pas forcément de goût/
M6 27. les pâtes aussi sont trop cuites/
28. sont beaucoup trop cuites/
29. et ont un aspect un peu farineux/
30. donc ça c’est toutes les différences/
31. autrement ce que je mange ici d’habitude beaucoup de
32. de pizzas d’hamburgers de desserts/
33. ce qui est au niveau des desserts les gâteaux au chocolat n’ont pas le goût de chocolat/
34. ça a le goût de sucre/
35. un concentré de sucre/
36. donc c’est les grandes remarques/
37. et aussi y a du soda à volonté/
38. chose qu’on verra jamais en France

Main IUs – 8
Supportive IUs – 8
Details – 16
Total IUs : 32
Appendix I

Transcript of text used in TA1 session

The speaker Paris (pseudonym); text in video format; text time – 01:42

**Question:** Comparez les coutumes culinaires en France à ceux en Amérique.

_Euh... je dirais ... la diversité... déjà en France on mange beaucoup-beaucoup de choses différentes parce que ici j’ai l’impression que c’est assez... assez redondant. C’est quoi exactement la question ? (Resaercher repeats the question). Je dirais qu’on mange moins de poulet en France. J’ai l’impression qu’on mange du poulet tout le temps ici, aux Etats-Unis... euh... en France on mange un peu moins de poulet et un peu plus de viande rouge, cuite pas autant qu’ici. Cuite où on voit encore... où il est un peu encore rouge, quand on coupe la viande, y a encore un petit peu de sang... ehu... et puis les repas sont plus longs, on passe plus de temps à table. Donc on va y avoir... y a pas forcement une entrée avant chaque plat mais on va manger le plat, puis heu... le fromage et un dessert qui va être généralement un fruit ou un yaourt. Donc... oui des repas plus longs aussi. Mais moi c’est un peu particulier parce que je mangeais toujours sur le campus, donc, heu ... je sais pas. Par exemple, en France je dirais que la nourriture dans les cantines et la nourriture qu’on mange chez soi, c’est pas la même chose. J’ai pas envie de limiter la nourriture américaine parce que je mange ici dans les Commons qui est ... qui sont un peu les cantines... Donc euh ... y a des choses ... y a des choses que j’aime par exemple dans la nourriture américaine... J’aime beaucoup le ‘cheese-cake’, c’est quelque ... Je sais pas comment... Je sais même pas comment ça se fait le ‘cheese-cake’. En France j’ai jamais entendi parler de ça et on sait pas du tout le préparer. Donc, c’est la chose que j’adore. J’aime aussi le crumble. Au fait, aux Etats-Unis ce que je préfère c’est les desserts, et les cookies, et les glaces. Je trouve que les desserts sont très bons aux Etats-Unis._

**Translation of the TA1 text**

**Question:** Compare French and American eating habits.

_Uhm… I would say… diversity … in France people eat many-many different things because…here I have the impression that…it’s rather… rather repetitve. What was the exact question? (Resaercher repeats the question)._
I would say in France people eat less chicken. I have the impression that here, in the United States, people eat chicken all the time. Uhm… In France people eat less chicken and a bit more red meat, medium-rare meat. Cooked in a way that you can see … it has red color, if you cut this meat, there is a bit of blood inside. Uhm…and then meals take more time, people spend more time sitting at the table. Thus, there will be… there are no always starters before the main dish but people eat the main dish, then uhm… cheese and a dessert which is generally a fruit or a yogurt. Thus… yes, meals take more time… But my case is a particular case because I always eat on campus, well, uhm… I don’t know. For instance, in France I would say canteen’s food and the food that you eat at home, it’s not the same thing. I don’t want to limit American food because I eat here in Commons which is… which are canteens… Well uhm… there are things… there are things that I like in American food… I really like cheese cake, it’s something … I don’t know how… I don’t even know how to make a cheese cake. I’ve never heard about it in France and we don’t know how to cook it. Well, this is the thing that I adore. I also like crumble. Actually, the things that I really like in the United States are desserts, and cookies, and ice-cream. I think desserts are really good in the United States.

Number of Idea Units (main, supportive, details) in the TA1 text

D1. 1. je dirais//
M1 2. la diversité déjà en France on mange beaucoup-beaucoup de choses différentes//
M2 3. parce que ici j’ai l’impression que c’est assez… assez redondant
D2. 4. euh…c’était quoi exactement la question ? (I repeat the question)
S1 5. Je dirais qu’on mange moins de poulet en France/
S2 6. j’ai l’impression qu’ici on mange du poulet tout le temps aux Etats-Unis//
D3. 7. euh en France on mange un peu moins de poulet et un peu plus de viande rouge/
D4. 8. cuite pas autant qu’ici/
D5. 9. cuite où on voit encore où il est un peu encore rouge/ quand on coupe la viande y a encore un petit peu de sang//
M3 10. et puis les repas sont plus longs/
S3 11. on passe plus de temps à table
D6. 12. donc on va y avoir y a pas forcément une entrée avant chaque plat
S4 13. mais on va manger le plat
S5 14. puis le fromage et un dessert qui va être généralement un fruit ou un yaourt//
M3 15. donc oui des repas plus longs aussi
D7. 16. ca dépend… ça dépend
D8. 17. mais moi c’est un peu particulier parce que je mangeais toujours sur le campus//
M4 18. donc je sais pas par exemple en France je dirais que la nourriture dans les cantines et la nourriture qu’on mange chez soi c’est pas la même chose//
19. donc j’ai pas envie de limiter la nourriture américaine je mange ici dans les Commons qui est/
20. qui sont un peu les cantines…donc /
21. y a des choses y a des choses que j’aime par exemple dans la nourriture américaine/
22. j’aime beaucoup le ‘cheese-cake’/ [laughter]
23. c’est quelque je sais pas comment je sais même pas comment ça se fait le ‘cheese-cake’/
24. en France j’ai jamais entendu parler de ça et on sait pas du tout le préparer/
25. donc, c’est la chose que j’adore/
26. j’aime aussi le crumble/
27. en fait aux Etats-Unis ce que je préfère c’est les desserts/
28. et les cookies et les glaces/
29. je trouve que les desserts sont très bons aux Etats-Unis

Main IUs – 5
Supportive IUs – 10
Details – 12
Total IUs : 27
Appendix J

Transcript of text used in NDA2 session

The speaker Clé (pseudonym); text in video format; text time – 01: 28

**Question:** Les restaurants français diffèrent-ils des restaurants américains?

Après au niveau de restaurants... au moins il y a deux choses qui je dirais choqueraient n’importe quel Français ici... deux choses... c’est la rapidité avec laquelle on est servi mais pas dans le sens on a nos plats... dans le sens... dans le sens... on a fini de manger... on a l’addition direct derrière. En France ca serait considéré comme particulièrement impoli. Un serveur qui fait ca en France ... peut avoir des problèmes... peut avoir des problèmes. C’est-à-dire que ...comme le restaurant est un moyen de passer un bon moment, on ne dit pas aux gens « Bon ben, vous avez passé votre bon moment, maintenant dehors’. Ça se fait pas ça. Heu, donc, c’est le client qui demande l’addition et on ne lui apportera pas avant qu’il la demande. Ça, c’est la première chose et la deuxième chose qui est à peu près pareille c’est justement débarrasser la table ... débarrasser les assiettes avant que tout le monde est fini. Ici bon... on est allé dans un... certain nombre de restaurants et à chaque fois c’était... la personne a fini, on lui enlève son assiette même si les autres ont pas fini. En France il faut attendre que tout le monde a fini pour débarrasser la table. C’était vraiment deux choses qui nous a un petit peu choqué... enfin choqué... On est pas mort mais ... mais...ce qu’on a fait ‘Ah, oui quand même ! C’est très différent’.

Translation of the NDA2 text

**Question:** Compare French and American restaurants.

Speaking of restaurants...at least there are two things that would chock any French here...two things ... it’s the rapidity of service but in the sense of ... they bring our dishes ... in the sense of... in the sense of... people finish to eat, waiters bring the bills right away. In France it would be viewed as particularly impolite. A waiter who does this kind of things in France may have problems ... may have problems. That is, a restaurant is viewed as a place where people have a pleasant moment, that’s why one cannot say ‘OK, you had your pleasant moment, now go away!’ That’s unacceptable. Uhm, it is clients’ job to request the bill and they will not have it before their request. This is the
first thing and the second which almost the same it’s about cleaning tables… clearing away plates before everyone has finished his/her plate. Here well… we went to a certain number of restaurants and every time it was… the person finished eating, they immediately remove his/her plate even though others did not finished. In France waiters have to wait that everyone at that table finishes eating in order to clean the table. Those are two things that shocked us a bit… well shoked… we didn’t die of course… but… we said “This is something different, though!”

**Number of Idea Units (main, supportive, details) in the NDA2 text**

| M1 | 1. après au niveau des restaurants |
| D1. | 2. au moins il y a une chose une chose qui |
| M1 | 3. je dirais choquerait n’importe quel Français |
| M1 | 4. ici … deux choses |
| M2 | 5. c’est la rapidité avec laquelle on est servi |
| D2 | 6. mais pas dans le sens on a nos plats |
| D2 | 7. dans le sens euh dans le sens |
| M3 | 8. on a fini de manger … on a l’addition direct derrière |
| M4 | 9. en France ca serait considéré comme partiuculièremen impoli |
| S1 | 10. un serveur qui fait ca en France peut avoir des problèmes |
| D3 | 11. peut avoir des problèmes c’est-à dire que |
| D4 | 13. comme le restaurant est un moyen de passer un bon moment |
| D5 | 14. on ne dit pas aux gens Bon ben, vous avez passé votre bon moment, maintenant dehors |
| D6 | 15. ça se fait pas ça |
| S2 | 16. donc c’est le client qui demande l’addition |
| S3 | 20. et on ne lui apportera pas avant qu’il la demande |
| D7 | 21. donc ça c’est la première chose et la deuxième chose qui est à peu près pareille est justement |
| M5 | 22. débarrasser la table débarrasser les assiettes avant que tout le monde est fini |
| D8 | 23. ici bon on est allé dans un certain nombre de restaurants et à chaque fois c’était |
| S4 | 24. la personne a fini on lui enlève son assiette même si les autres ont pas fini |
| S5 | 25. en France il faut attendre que tout le monde ait fini… pour débarrasser la table |
| M1 | 26. c’était vraiment deux choses qui nous a un petit peu choqué |
| D9 | 27. enfin choqué on est pas mort ah |
| D10 | 28. mais… mais qui nous a interpellé vraiment |
| D11 | 29. qu’on a fait ‘ah, oui quand même.. c’est très différent’… |

============================================================================

Main IU – 5
Supportive IU – 5
Details – 11
Total : 21
Appendix K

Transcript of text used in DA2 session

The speaker Ama (pseudonym); text in video format; text time – 01: 40

**Question:** Les restaurants français diffèrent-ils des restaurants américains?

Je trouve que la grande différence au niveau des restaurants c’est plutôt au niveau du service et de la mentalité du restaurant. C’est-à-dire que... et je pense que... une des grandes raisons c’est le système du pourboire parce que ici heu... parce que en France le pourboire est inclus ... et donc y a pas... y a pas autant... d’importance accorder au service. Pas que le service est mauvais en France mais bon, il n’est pas non plus génial... mais bon... La différence c’est que ... quand on va dans un restaurant en France avec mes copines ou dans un café... je veux dire on y reste pendant des heures et des heures ... je veux dire ... c’est vraiment une culture de... Quand on s’assoit pour un café ou on s’assoit pour manger, c’est on s’assoit, on prend du temps, on discute de tout et de rien de choses, on discute pendant des heures. C’est-à-dire que... on peut rester... Typiquement je reste dans un restaurant pendant au moins deux heures ou trois heures sauf si je suis pressée en France. Ici c’est ‘Finissez’... C’est vraiment on a l’impression que bon il faut finir... dès qu’on a fini bon il faut partir ... ‘Laissez plus de gens venir’... Et je comprends parce que ... je veux dire les serveurs et puis j’ai travaillé dans un restaurant ici... Je comprends enfin, ils se font payer rien du tout et puis leur paie vient du pourboire. Le plus de gens ils mangent, le plus d’argent ils font. Et je pense que ça c’est dans la mentalité aussi américaine. Bon voila je veux dire ‘Un restaurant on y reste, on mange, on part. On discute un petit peu, on part’. Mais y a pas autant... et puis y a pas autant de cet aspect ‘On s’arrête, on discute pendant longtemps’... C’est un moment... c’est un moment social vraiment...

Translation of the DA2 text

**Question:** Compare French and American restaurants.

I think that speaking of restaurants the big difference consists in the service and in the mentality of restaurants. That is... and I think that one of the most important reasons resides in the system of tipping because here... because in France tips are included... and therefore, there is no... waiters don’t really need to care about service. It doesn’t mean
that the service is bad in France but, well, it is not awesome either... but well... The
difference resides in... when I go to a restaurant in France with my friends or to a café...
we spend there hours and hours... it's really a culture of... When we sit down for a
cup of coffee or we sit down to eat, it is also about we sit down, we relax, we talk, we chat, we chat hours and hours. That is... we can be there... Typically I can spend at least
two or three hours at a restaurant if I am not in a hurry in France. Here it's about
“Finish’... You really have the impression that well... you have to finish as soon as you
are done with your dish, you have to leave... ‘Allow more people come’... And I
understand it because... waiters and I worked at a restaurant here. I understand them,
they have almost nothing in terms of payment and their payment comes from tips. The
more people they serve, the more money they earn. And I think this thing is in American
mentality too. So, well, I mean ‘A restaurant, we go there, we eat and we leave. We chat
a bit, and we leave’. But there is no... there is no such things like ‘We go there and we
talk for a long time’... it’s a moment ... it’s a really social moment...

Number of Idea Units (main, supportive, details) in the DA2 text

M1 1. je trouve que la grande différence au niveau des restaurants
M1 2. c’est plutôt au niveau du service et de la mentalité du restaurant c’est-a-dire que
M2 3. et je pense que une des grandes raisons c’est
M2 4. c’est le système du du pourboire parce que ici
S1 5. parce qu’en France le pourboire est inclus
S2 6. donc y a pas euh y a pas autant de de d’importance accorder au service
D1 7. pas que le service est mauvais en France mais bon il n’est pas non plus génial
D1 8. la différence c’est que
D3 9. quand on va dans un restaurant en France
D4 10. avec mes copines ou dans un café
D5 11. je veux dire on y reste pendant des heures et des heures
D6 12. je veux dire c’est vraiment une culture de
D7 13. que ça soit quand on s’assoit pour un café ou on s’assoit pour manger
D8 14. c’est on s’assoit on prend du temps on discute de tout et de rien de choses on
discute pendant des heures
D9 15. c’est-a-dire que on peut rester
D10 16. typiquement je reste dans un restaurant pendant au moins deux heures ou
trois heures sauf si je suis pressée en France
M3 17. ici c’est euh c’est finissez
M3 18. c’est vraiment on a l’impression que
M3 19. bon il faut finir dès qu’on a fini bon il faut partir laissez plus de gens venir
D11 20. et je comprends parce que
D12 21. je veux dire les serveurs et puis j’ai travaillé dans un restaurant ici
D11 22. je comprends enfin
M4 23. ils se font payer rien du tout et puis leur paie vient du pourboire
S3 24. donc le plus de gens y mangent, le plus d’argent ils font
S4 25. et je pense que ca c’est dans la mentalité aussi américaine
D13 26. c’est ‘Bon voila’ je veux dire ‘un restaurant on y reste on mange on part
D14 27. on discute un petit peu, on part’
D15 28. mais y a pas autant et puis y a pas autant de cet aspect
D16 29. on s’arrête, on discute pendant longtemps
D17 30. c’est un moment c’est un moment social

==================================================================================================
Main IUs – 4
Supportive IUs – 4
Details – 17
Total IUs : 25
Appendix L

Transcript of text used in TA2 session

The speaker Nic (pseudonym); text in video format; text time – 01: 25

Question: Dans votre famille, quels sont vos repas quotidiens, de tous les jours ? Quels sont vos plats préférés ?

Alors... L’organisation de la table est très formelle... c’est-a-dire... euh... il y a ... la table, il y a deux personnes de chaque cotés et une personne au bout de table. Je suis toujours la personne au bout de table, après mes deux parents sont l’un en face de l’autre près de moi et après il y a mon petit frère et ma petite sœur l’un en face de l’autre... toujours le même... le même... euh... dispositif. Quand on va chez mes grands parents, il y a toute une règle pour s’installer à table. C’est les personnes âgées... euh... les plus âgées au milieu, et à chaque fois c’est ‘file-garçon’, ‘fille-garçon’, en partant du plus âgé au plus jeune. Les plus jeunes sont au bout de table et les plus âgés sont au milieu de table. Dans ma famille proche dont mes parents, ma petite sœur, il y a ce système-là... on amène les plats à table et on mange .... quand tous les plats sont là. On n’a pas... on a rarement des entrées chez nous parce que la ...la parce que c’est dans... dans nos habitudes on a tout le temps des desserts. Mon père prend du fromage entre le plat principal et le dessert. Autrement on a... mes parents boivent du vin tous les soirs lors du repas, un verre de vin à peu près et nous nous buvons de l’eau. Les repas sont composés ... pas de viande, de légumes principalement ... Donc, les viandes ça pourrait être du bœuf, du porc, du canard, du lapin, tous les types de viande.

Translation of the TA2 text

Question: What are the usual/everyday meals in your family? What are your favorite meals?

Well... The organization of the table is very formal... that is... uhm... there is ... a table, there are two persons on each side and one person at the end of table. I am always at the end of table, then my two parents are in front of each other, and then there are my little brother and my little sister, sitting in front of each other... always the same... the same... uhm order. When we go to my grandparents’ place, they have a very special table rules. Old people are... uhm... old people are in the middle and every time it’s ‘girl-boy’,
‘girl-boy’, going from the most old to the most young. Those who are young are at the end of table and those who are old are at the middle of table. There is a system in my nuclear family which consists of my parents, my little sister… we bring all dishes to the table and then we start to eat… when all dishes are on the table. We don’t have… we don’t really have starters because…because one of our habits… we eat desserts all the time. My father eats some cheese between the main dish and the dessert. Also we have… my parents drink wine every night, a glass of wine and we… we drink water. Our meals include … not meat but mostly vegetables. Ell speaking of meat, it can be beef, pork, duck, rabbit, all kinds of meat.

Number of Idea Units (main, supportive, details) in the TA2 text

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Appendix M

Transcript of text used in TA3 session

A news report from *France 3* (a French TV channel), broadcasted – October 3, 2006: ‘*Marseille: non-fumeurs dans une brasserie*’; text in video format; text time - 01:32

**Waitress’ voice**: Fumeur-non fumeur ?
**Clients’ voices**: non-fumeurs
**Waitress’s voice**: Venez avec moi.

**Unidentified male**: C’est catastrophique! J’aime manger, j’aime bien ... boire un verre de vin, j’aime bien écouter la musique. Aujourd’hui si j’ai envie d’aller écouter la musique dans un club de jazz, j’adore le jazz, je ne pourrai plus fumer ?! C’est pas possible!

**Reporter’s voice**: Dans cette brasserie comme dans de nombreux bars ou restaurants depuis la loi 20 de janvier 91 un consensus a été trouvé entre fumeurs et non-fumeurs avec des zones réservées à chacun. Dans bien des cas, avec un peu de bonne volonté d’une part et d’autre (inaudible), ça fonctionne. L’interdit, pur et simple, pourrait bien relancer la guerre du tabac.

**Unidentified male**: Moi je pense, pour moi personnellement, qui suis non-fumeur... hein... Je pense que c’est pas quelque chose ... pour moi... de très bien...dans la relation entre les gens parce que dès qu’on interdit automatiquement il y a une relation qui devient un peu plus conflictuelle.

**Reporter’s voice**: En France le tabagisme passif est responsable d’environ de cinq mille décès par an. En termes de santé publique il est donc naturel que le gouvernement intervienne. Reste affaire à appliquer cette nouvelle loi, il ne sera pas si évident de faire disparaître ce petit ustensile des cafés et des restaurants.

Translation of the TA3 text

**Waitress’ voice**: Smoking? Non-smoking?
**Clients’ voices**: Non-smoking.
**Waitress’s voice**: Come with me..
**Reporter’s voice:** Smoking? Non-smoking? Next year, this ritual question is likely to disappear from all public places. In this brasserie of Marseille which is very popular, during lunch time the majority of clients are non-smokers and they congratulate themselves on this new law. But for others, tobacco-lovers, it’s rather hard to swallow this smoking.

**Unidentified male:** It’s a catastrophe! I like to eat, I like to… drink a glass of wine, I like to listen to the music. Today, if I want to go to a jazz club, I adore jazz, I won’t be allowed to smoke? It is not possible!

**Reporter’s voice:** Since January 91 at this brasserie, as well as at many others bars and restaurants, the consensus found among smokers and non-smokers reserves special zones for each group. In many cases it works on a voluntary basis. However, the forbidden fruit could relaunch the tobacco war.

**Unidentified male:** Personally I think… and I am a non-smoker… uhm… I think that it’s not about something … for me… good in people’s relationship because as soon as something is prohibited, automatically there is a relation which becomes controversial.

**Reporter’s voice:** In France the passive smoking is responsible for almost five thousands deaths per year. Therefore, it is necessary that the government intervene. Then, comes a question of how to administer this law, otherwise this little utensil (ashtray) will not disappear from cafés and restaurants.

---

**Number of Idea Units (main, supportive, details) in the TA3 text**

D1 **Waitress’ voice** : Fumeur-non fumeur ?
D2 Clients’ voices : non-fumeurs
D3 Waitress : Venez avec moi.

**Reporter’s voice** :

M1 1. Fumeur non-fumeur dès l’an prochain cette question rituelle pourrait bien disparaître de tous les lieux publics
S1 2. dans cette brasserie marseillaise très fréquentée à l’heure du déjeuner
S2 3. les non-fumeurs sont largement majoritaires
S3 4. et tous se félicitent bien sûr de cette nouvelle législation
D4 5. mais pour les autres
D5 6. les adeptes du tabac
D6 7. cette fumée-la est plutôt désagréable à avaler

**Unidentified male** :

M2 8. c’est catastrophique
D7 9. j’aime manger… j’aime bien boire un verre de vin… j’aime bien écouter la musique
S4 10. aujourd’hui si j’ai envie d’aller écouter la musique dans un club de jazz
D8 11. j’adore le jazz
M2 12. je ne pourrai plus fumer
D9 13. c’est pas possible
Reporter’s voice:
M3 14. dans cette brasserie comme dans de nombreux bars ou restaurants depuis la loi 20 de janvier 91
M3 15. un consensus a été trouvé entre fumeurs et non-fumeurs
D10 16. avec des zones réservées à chacun
D11 16. dans bien des cas avec un peu de bonne volonté d’une part et d’autre ça fonctionne
S5 17. l’interdit pur et simple pourrait bien relancer la guerre du tabac.
Unidentified male:
D12 18. moi je pense pour moi personnellement qui suis non-fumeur
D13 19. je pense que c’est pas quelque chose pour moi
D14 20. de de très bien dans la relation entre les gens parce que…euh…
M4 22. des qu’on interdit automatiquement il y a une relation qui devient un peu plus conflictuelle
Reporter’s voice:
M5 23. en France le tabagisme passif est responsable d’environ de cinq mille décès par an
M6 24. en terme de santé publique il est donc naturelle que le gouvernement intervienne…
=================================================================================================
Main IUs – 6
Supportive IUs – 5
Details -14
Total IUs – 25
Appendix N

Transcript of text used in TA4 session

A radio commercial recorded from the French radio station *Chérie FM*: “Léon de Bruxelles” (text in audio format); text time – 00:20

**Feminin voice**: Bientôt midi. C’est le moment d’aller déjeuner chez « Léon de Bruxelles ». Moules et frites au menu.


Translation of the TA4 text

**Feminin voice**: Soon it will be noon. It is time to go to *Léon de Bruxelles* and to have a lunch. Mussels and fries on the menu.


Number of Idea Units (main, supportive, details) in the TA4 text

**Feminin voice**:

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**Masculin voice**:

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Main IUs -2  
Supportive IUs -3  
Details – 1  
Total IUs : 6
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