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**Student perceptions  
of a self-regulatory approach  
to second language listening comprehension development**

**Catherine Mareschal**

Thesis submitted to the  
Faculty of Graduate and Postdoctoral Studies  
In partial fulfillment of the requirements  
For the PhD degree in Education

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## ABSTRACT

This study investigated:

- (1) the effects of a process-based, self-regulatory approach to second language (L2) listening instruction on language learners' (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension,
- (2) the interrelationships between language learners' metacognitive awareness, self-regulatory abilities, listening comprehension strategy use, and their overall success in listening comprehension, and
- (3) language learners' perceptions and attitudes towards a self-regulatory approach to L2 listening comprehension development.

The participants came from two small groups of native anglophone Canadian federal government employees enrolled in a mandatory French as a L2 learning program. One group, at the beginner-intermediate level, had been assessed by the learning institution as low-achievers; the other group, at the intermediate-advanced level, had been assessed as high-achievers.

Six data collection instruments – questionnaires, stimulated recalls, think-alouds, interviews, listening note-books, and observation – were cyclically used to complement, explain, and verify the findings elicited by each instrument in the investigation of the research questions. In addition, at the end of the study, the students and their instructors

completed individual summative reports of evaluation of the pedagogical method investigated in this research.

All sources of data concur in indicating that low- and high-proficiency students responded positively to the pedagogical approach examined, and that this method exerted beneficial effects on low- and high-proficiency students' metacognitive awareness, strategy use, and on their confidence and interest in L2 listening. The beneficial effects of this approach are most evident in the case of the low-proficiency students, whose think-aloud protocols reveal a considerable improvement in listening comprehension success over the course of the nine week listening training.

This study provides detailed insights into the components of metacognitive, self-regulatory, and strategic knowledge – as well as individual listener characteristics – which influence L2 listeners' comprehension, and into the intricate interrelationships among these factors.

The study also provides detailed insights into the advantages and drawbacks of the various instruments which can be utilized in L2 listening research. These methodological findings underscore the necessity for rigorous data triangulation in the investigation of the covert processes underlying listening comprehension.

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## DEFINITIONS OF TERMS

**Bottom-up processing**, also commonly referred to in the listening comprehension research literature as ‘lower-level processing’, involves piecing together the parts of what is being heard from the perception or comprehension of the sum of the discrete sounds, syllables, words, or phrases (Ur, 1984).

**Input** is the term which is commonly used in L2 listening comprehension to refer to the aural language which a listener is exposed to.

**Interactional listening** is the term used to refer to situations when a listener is in direct interaction with another / other speaker(s).

**Metacognition** is commonly understood to include *metacognitive knowledge* and *metacognitive strategies* or *skills*, which are regarded as separate and distinct, but complementary components (Wenden, 1999).

**Metacognitive knowledge / Metacognitive awareness** are two terms which are most often used interchangeably in the research literature. *Metacognitive knowledge* refers to the declarative knowledge one has about the interplay between personal characteristics, task characteristics, and available strategies in a learning situation (Flavell, 1979; Veenman & Spaans, 2005).

**Metacognitive strategies or skills** refer to the procedural knowledge that is required for the actual regulation of and control over one’s learning activities. Task analysis, planning, monitoring, checking, and reflection are manifestations of such skills (Veenman & Spaans, 2005).

**Metacognitive knowledge / Metacognitive awareness in second language listening** is thought to include listeners’ general knowledge about human factors (such as cognitive and affective variables) which facilitate or inhibit their listening comprehension, and their specific knowledge of how these factors apply in their experience of second language listening (including their perception of the difficulty presented by listening, their perceived ability as listeners, and their general self-efficacy beliefs). Current conceptions of metacognitive knowledge also encompass listeners’ abilities to assess the nature, purpose, and demands of a listening task, including the knowledge, skills and strategies required (Goh, 1997, 2000; Wenden, 1998, 1999, 2002).

**Parsing** is commonly understood, in L2 listening comprehension research, as the second (of three) comprehension phase(s) which involves transforming words into a mental representation of the combined meaning of these words, by segmentation of utterances according to syntactic structures, or cues to meaning (Anderson, 1985; Goh, 2000; O’Malley & Chamot, 1990).

**Perceptual processing** is commonly understood, in L2 listening comprehension research, as the first (of three) comprehension phase(s) corresponding to the encoding of the acoustic message. It involves segmenting phonemes from the continuous speech stream, relating the sounds of the incoming signal to the mentally represented sound categories of the language, and retaining the sounds in echoic memory (Anderson, 1985; Field, 1999; O'Malley & Chamot, 1990).

**Self-regulation / self-regulatory abilities / self-directed learning** are used interchangeably in the research literature to refer to the self-directed process through which students act as metacognitively, motivationally, and behaviorally active participants in their own academic learning (Boekaerts et al., 2000; Zimmerman & Schunk, 2001).

**Self-regulated learners**, in most conceptualizations in the research literature, are aware of what they know, what they believe, and what the differences between these kinds of information imply for approaching tasks. They draw on their knowledge and beliefs to construct an interpretation of a given academic task, and they set goals for extending knowledge and sustaining motivation. They have a grasp of their motivation, are aware of their affect, and plan how to manage the interplay between these factors in their approach to a task. Such learners deliberate about the skills and strategic processes which might be best suited for attaining their goals, and judge performance success in comparison with those goals. They perceive cues accurately, examine the strategies they have selected in light of their achievements, and adjust their activities accordingly. At the same time, these learners manage the interplay between the cognitive and affective aspects of their behaviour during engagement with the task, sustaining motivation when encountering obstacles (Boekaerts et al., 2000; Winne, 1995, 1996, 2001; Zimmerman & Schunk, 2001).

**Self-regulatory approaches to listening comprehension development** foster the active engagement of the learner with the aural language and the listening comprehension process, and promote independent and critical thinking in second language listening and learning.

More specifically, for the purposes of this study,

**a self-regulatory approach to L2 listening comprehension development** is understood as a pedagogical approach aimed at facilitating students' acquisition of listening skills by gradually guiding them toward confidently and competently taking control of their own listening skills development by providing them with regular opportunities and adequate time to (1) identify and reflect (a) upon the nature and sources of the particular difficulties which they experience while listening to the target language (to develop their *person* metacognitive knowledge), (b) upon the complexities of the cognitive processes involved in listening comprehension, and the requirements for listening comprehension success in their target language (to develop their *task* and *strategic* metacognitive knowledge), and (c) upon means through which their particular listening difficulties could be dealt with realistically (to further develop their *person*, *task* and *strategic* metacognitive knowledge), in order that the learners may (2) take an active part in overcoming some of their listening difficulties (adapted from Goh, 2000 and 2002a,b).

**Stimulated recall** methodology, in L2 listening comprehension research, is used more specifically to explore learners' thought processes and strategies at the time of an activity or

task. This is achieved by asking learners to report those thoughts after they have completed the task or activity. Stimulated recall is conducted with some degree of *support* for the recall, such as the learners' L2 written product or questionnaire responses. The theoretical foundation for stimulated recall relies on an information-processing approach whereby the use of and access to memory structures is enhanced by a prompt that aids in the recall of information (Gass & Mackey, 2000).

**Strategies** are understood in the present study as the cognitive procedures utilized to comprehend the intended meaning of a spoken message in a second or foreign language. A description of the transactional listening strategies referred to in this thesis is provided in Appendix A.

**Think-alouds** are an introspective data collection technique which allows L2 listening comprehension researchers to document listeners' approaches to listening tasks, their level of decision making, and the factors which govern their decisions. One of the features of concurrent analysis of an ongoing task is that the mental processing in short-term memory can be described and reported, whereas it may be lost in retrospection. The think aloud - concurrent - procedure can thus provide different kinds of information concerning listeners' comprehension processes from those elicited by retrospective procedures (Ericsson & Simon, 1987; Færch & Kasper, 1987).

**Top-down processing**, which is also commonly referred to in the listening comprehension research literature as 'higher-level processing', is holistic, going from a whole to a part, focused on the interpretation of meaning rather than on the recognition of sounds, words and sentences. Listeners are said to employ top-down processing when they actively formulate hypotheses concerning the meaning of aural messages, and confirm and modify their developing interpretations as the unfolding message warrants (Field, 1999; Vandergrift, 2003a).

**Transactional listening**, which is also commonly referred to in the research literature as unidimensional listening, refers to situations when the listening involves only reception of the aural message (i.e. no response or interaction).

**Utilization** is commonly understood, in L2 listening comprehension research, as the third (of three) comprehension phase(s) during which mental representations of the meaning of an aural message are related to existing knowledge and stored in memory as 'propositions' or 'schemata', to assist comprehension and recall (Anderson, 1985; Goh, 2000; O'Malley & Chamot, 1990).

**LIST OF ABBREVIATIONS**

**EFL** English as a foreign language

**ESL** English as a second language

**HP** high-proficiency

**LP** low-proficiency

**L1** first language

**L2** second language

**L3** third language

**NL** native language  
(used interchangeably with L1 in the research literature)

**P1** the main instructor in each participating group  
(who provided four and a half hours of the daily language instruction)

**P2** the second instructor in each participating group  
(who provided two and a quarter hours of the daily language instruction)

**SLA** second language acquisition

## Chapter I

### Introduction

#### 1.1 Issues

Listening, which was long the ‘Cinderella’ of the four language skills (Mendelsohn, 1994), has rightly come to assume a central role in language learning theory. In the last three decades, “the skills underlying listening have become more clearly defined”, and the “strategies contributing to effective listening are now better understood”. However, “teaching methodology, in the mainstream, has not yet caught up” with advances in theory. In many language curricula, “listening is still often considered a mysterious ‘black box’, for which the best approach seems to be simply ‘more practice’. Specific skill instruction as well as strategy development still need greater attention in order to demystify the listening process” (Rost, 2001).

In a number of language learning contexts, learners are still expected to acquire listening skills by osmosis, as was the norm until the not too distant past. In a number of other language learning contexts, “a conventional listening comprehension lesson simply adds yet another text to the learners’ experience; it does little or nothing to improve the effectiveness of their listening, or to address their shortcomings as listeners. Learners may have experienced difficulties at certain points of the listening text; these are attended to in terms of the language and meaning of the text, but no attention is paid to what may have gone wrong in the process of listening. Hence the likelihood that, confronted again with a similar text, learners will use the same, unsuccessful techniques. They will not have improved as

listeners. Under the present ‘comprehension’ approach, success in listening comprehension is measured by correct responses to questions or tasks. Teachers focus on the outcomes of listening, rather than upon learning itself, upon product rather than process” (Field, 1998).

As a result of the fact that listening activities remain principally a *test* of comprehension, listening comprehension is the skill in which students often feel they have achieved the least. Compounding this regrettable situation is the fact that many language learners attribute their difficulties in listening to what they perceive as their low ability, or the high difficulty of the listening texts or tasks, with little awareness or understanding of the role played by their ineffective skills or strategy use. “Such attributions indicate a sense of passivity and helplessness in language learners” which could easily result in their becoming “demotivated, resigned to being less effective listeners” (Graham, 2006), and in these circumstances, offering language learners who find listening difficult *more* listening passages will most likely only add to their sense of failure (Chambers, 1997; Field, 2000; Graham, 2006).

This situation has prompted an increasing number of L2 researchers to argue that “learners need to feel a sense of control over their listening”, and that they need to feel “that improvement is possible”. “There is thus a need for language teachers to address both how their students listen, and their beliefs about listening comprehension and about themselves as listeners” (Graham, 2006). This need is all the more pressing in that, with the advent of ‘self-access centers’, computer-assisted language learning, and other forms of learning beyond the classroom, what Allwright (1988) termed the ‘radical restructuring of language pedagogy’ has become a reality with which many language teachers – and learners – must now come to terms (Benson, 2006).

The central pedagogical problem needing resolution now identified, the crucial question is: *How* could this problem best be addressed?

Recent investigations (e.g. Field, 1998; Goh, 2000, 2002a,b; Vandergrift, 2002, 2003b; Victori & Lockhart, 1995; Wilson, 2003; Wu, 1998) into L2 listeners' comprehension problems – and into the relationship between listeners' metacognitive knowledge and their listening skills – appear to provide one comprehensive and practical, theoretically- and empirically-founded solution, in answer to the problems and challenges facing L2 listeners, particularly in the early stages of language learning.

This particular solution appears all the more promising now that educational and cognitive psychology research has revealed that intricate interrelationships exist between metacognitive awareness and self-regulation (Butler & Winne, 1995; Fernandez-Duque, Baird & Posner, 2000a,b; Rivers, 2001; Shimamura, 2000; Veenman & Spaans, 2005). It is reasonable to expect that these interrelationships exert a fundamental influence on L2 listeners' strategic approach and achievement in comprehension. However, these interrelationships and their possible effects on learners' comprehension have not to date been investigated in the field of L2 listening research, and they consequently have not been taken into account in L2 listening pedagogy.

## **1.2 Research questions**

In light of the importance of listening skills in language acquisition, the many difficulties

facing L2 listeners in the early stages of language learning, the important unanswered questions in the field of L2 listening research, and the promising new evidence from the few studies which have recently investigated the effects of metacognitive / strategic awareness-raising pedagogical approaches to listening skills development, this study investigated the three following questions:

1. What are the effects of a self-regulatory approach to L2 listening instruction on language learners' (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension?
2. Are there interrelationships between language learners' metacognitive awareness, self-regulatory abilities, listening comprehension strategy use, and their overall success in listening comprehension? If so, what are these interrelationships?
3. What are language learners' perceptions and attitudes towards a self-regulatory approach to L2 listening comprehension development?

### **1.3 Overview of the thesis**

Chapter II of this thesis presents a review of second or foreign language listening comprehension research focusing more particularly on the intricate cognitive processes involved in L2 listening, and on the particular difficulties which the acquisition of this skill can present for language learners. This description is followed by an examination of pedagogical attempts to assist learners' acquisition of L2 listening skills.

Chapter III describes the methodological design adopted for the study. The rationale for the choice of the methodological design is explained, and a detailed description of the criteria followed in this research is provided. This is followed by a description of the research context, participants, and of the pedagogical approach investigated in this study. The data collection procedure is then described in detail. The merits and shortcomings of each of the instruments which were used are reviewed, and the particular use which was made of each instrument is explained. This third chapter concludes with a description of the data analysis procedure.

Chapter IV presents the data provided, respectively, by students' questionnaire responses and stimulated recall protocols on the questionnaire, by their think-aloud protocols, end-of-study summative reports, listening note-books, and by their instructors' end-of-study summative reports. The presentation of the data elicited by each instrument is followed by a brief summary of these findings. This fourth chapter concludes with a comprehensive summary of the answers provided to each of the three research questions by these six sources of data.

Chapter V opens with a brief overview of the principal findings of this study. The main results pertaining to each research question are then individually discussed in the light of previous empirical evidence in the field of L2 listening and related research fields. This discussion is followed by an examination of the main theoretical, pedagogical, and methodological implications of the findings of this study, and suggestions for future research. This fifth chapter concludes with a final summary of the findings of this research while acknowledging its limitations.

## Chapter II

### Review of L2 listening comprehension literature

#### 2.0 Introduction

Second language acquisition research over the past three decades has established that listening plays a key role in language learning (Dunkel, 1991; Færch & Kasper, 1986; Mendelsohn, 1998; O'Malley & Chamot, 1990; Oxford, 1993; Rubin, 1994; Tsui & Fullilove, 1998). Research into L2 listening has also highlighted the complex intricacies of the processes involved in this cognitive skill (McLaughlin, Rossman & McLeod, 1983). In order to make sense of spoken messages, L2 listeners need to integrate information from a range of sources: phonetic, phonological, prosodic, lexical, semantic, and pragmatic (Lynch, 1998; Lynch & Mendelsohn, 2002).

Most recently, research in educational and cognitive psychology has revealed that intricate interrelationships exist between metacognitive awareness and self-regulation (Butler & Winne, 1995; Fernandez-Duque, Baird & Posner, 2000a,b; Rivers, 2001; Shimamura, 2000; Veenman & Spaans, 2005) which likely exert a fundamental influence on L2 listeners' strategic approach and achievement in comprehension. The precise nature of these interrelationships between language learners' metacognitive awareness, their self-regulation, and their strategy use and overall success in the case of unidimensional ('transactional') L2 listening comprehension are the focus of the research reported here. The rationale for examining the *transactional* listening process in this study was two-fold. First, transactional listening tasks would allow the research participants to concentrate solely on the

development or refinement of their listening skills, free of the precise and taxing demands which oral production places on a language learner. In addition, transactional listening tasks would allow the researcher to document the research questions of interest in this study – particularly the listening process – free of the confounding influence and burden of the oral production task on the learners' comprehension.

## **2.1 Current knowledge of L2 transactional listening comprehension**

### **2.1.1 Bottom-up and top-down processing**

The main resources available to L2 listeners have traditionally been grouped under *bottom-up* and *top-down* processes, metaphors borrowed from cognitive psychology, but originally derived from computer science where they were used to distinguish data-driven from knowledge-driven processes (Field, 1999). There is now a general consensus among researchers that a key factor in successful listening is the ability to efficiently integrate information gathered through both of these types of processes (Field, 2004; Lynch & Mendelsohn, 2002; McLaughlin et al., 1983; Tsui & Fullilove, 1998).

*Bottom-up processing* involves piecing together the parts of what is being heard in a sequence. Listeners always have to do some bottom-up processing of what they hear at the acoustic level, to discriminate, for example, between different but similar sounds, in order to facilitate the accompanying top-down processing. The latter is in a way the converse of bottom-up processing, since *top-down processing* is holistic, going from a whole to a part, focused on the interpretation of meaning rather than on the recognition of sounds, words and

sentences. Listeners are said to employ top-down processing when they actively formulate hypotheses concerning the meaning of aural messages, and confirm and modify their developing interpretations as the unfolding message warrants. In top-down processing, listeners rely on the prior knowledge and experience stored in their memory. Nonetheless, as pointed out by Field, contextual information can come from many different sources: from the listener's personal knowledge of the world, but also from the listener's knowledge of the speaker; from analogy with a previous situation, or from the meaning that has been built up; it can be derived from an expectation set up before listening; it can take the form of 'spreading activation', where one word sparks off associations with others, or yet again, it can be based upon the probability of one word following another (Field, 1999).

Listeners' memory stores of knowledge and experience are commonly referred to as 'schema(ta)'. Two types of schemata have most frequently been referred to in discussions of L2 listening: *content schemata*, which are conceived of as networks of knowledge on different topics comprising knowledge gained from a range of sources and personal experience, and *rhetorical* (or 'organizational' or 'textual') *schemata*, which refer to the knowledge of the structure or organization of discourse (Lynch & Mendelsohn, 2002).

### **2.1.2 Processing phases**

Drawing upon cognitive theories of declarative and procedural knowledge, complex skill acquisition theories, and their own research findings, O'Malley, Chamot, and their collaborators (O'Malley et al., 1985a; 1985b; 1987; 1989) attempted to ground the study of L2 listening comprehension (O'Malley & Chamot, 1990) within Anderson's (1985)

cognitive model of first language (L1) comprehension. Many L2 listening researchers have since argued that a cognitive model such as Anderson's is useful for understanding L2 listening comprehension – and L2 listening difficulties in particular – because many similarities have been documented in the fundamental cognitive processes of L1 and L2 comprehension, and further, a cognitive model pinpoints where comprehension can break down in cognitive processing. This knowledge can in turn help researchers trace the sources of these difficulties in learners. Knowing *why* and *where* some of the listening comprehension problems occur can then assist researchers and instructors in discovering *how* to help learners overcome some of these difficulties (Goh, 2000; 2002a).

Since the formulation of O'Malley and Chamot's framework in 1990, a number of investigators have published corroborative evidence of these researchers' claims, and this more recent research into L2 comprehension processes has helped to further complement and refine O'Malley and Chamot's original cognitive framework (e.g. Goh, 1997, 2000, 2002a; Vandergrift, 1997, 2003a,b).

In particular, numerous studies have validated O'Malley and Chamot's original 1990 strategy taxonomy. This inventory, which "has so far been the most influential categorization adopted as the framework for investigating and categorizing strategies for learning specific skills" (Zhang & Goh, 2006, p. 201) includes such fundamental transactional listening comprehension strategies as planning, directed / selective attention, monitoring, problem identification, inferencing, elaboration, translation, transfer, imagery, and evaluation (O'Malley & Chamot, 1990, p. 137-138) (see Appendix A for a detailed description of all transactional listening comprehension strategies referred to in the present study).

Moreover, L2 listening comprehension research has provided evidence for the existence of three listening comprehension processing stages (Anderson, 1985) which are interrelated, recursive, and can be almost concurrent: *perceptual processing*, *parsing*, and *utilization* (Goh, 2000; O'Malley & Chamot, 1990; Vandergrift, 2003a).

#### **2.1.2.1 Pre-listening phase**

Extensive evidence suggests that the cognitive processing done by L2 listeners, even *prior* to the reception of the acoustic message, can influence their comprehension (Eilam & Aharon, 2003; Goh, 2000; Mendelsohn, 1998; Winne, 1995). Preparing for the listening by using planning, self-control, evaluation, and prediction strategies – such as summoning concentration, determination and self-confidence, assessing the requirements of the listening, bringing to immediate consciousness any prior knowledge of the topic, or reflecting upon the purpose of the listening – can assist L2 listeners in deciding how to approach the task, and guide their inferences and elaborations during the course of the listening (Vandergrift, 2003a,b).

This advance organization prior to L2 listening constitutes an example of what Flavell (1979) called 'metacognitive knowledge'. Veenman & Spaans (2005) explained that *metacognitive skills* are often distinguished from *metacognitive knowledge*:

“The latter concept refers to the declarative knowledge one has about the interplay between personal characteristics, task characteristics, and available strategies in a learning situation (Flavell, 1979). Metacognitive skills, on the other hand, concern the procedural knowledge that is required for the actual regulation of and control over one's learning activities. Task analysis, planning, monitoring, checking, and

reflection are manifestations of such skills. Metacognitive skills appear to be highly interdependent. A thorough orientation on the task may help students to focus on relevant information given in the task assignment for building an adequate representation of the task. Consequently, a detailed action plan can be designed, containing goals and directions for subsequent learning activities. Such an elaborate action plan is a steppingstone to more process control during task performance. Working systematically according to that plan may enable the student to keep track of progress being made. Evaluation or monitoring activities, which are necessary for detecting faulty procedures and mistakes, are more fruitful within the framework of such an action plan. Finally, elaboration and reflection activities like drawing conclusions, recapitulating, and learning from one's experiences are more helpful if they are based on a clear trace of activities." (Veenman & Spaans, 2005, p. 160).

As Wenden (1999) had similarly remarked, *metacognitive knowledge* and *metacognitive strategies* or *skills* should thus be recognized as separate and distinct, complementary components of the broader notion of metacognition. Numerous studies in various fields of comprehension research suggest that metacognitive knowledge exerts a very important influence on language processing (Bolitho, Carter, Hugues, Ivanic, Masuhara & Tomlison, 2003; Eilam & Aharon, 2003; Mokhtari & Reichard, 2002; Rivers, 2001; Schoonen, Hulstijn & Bossers, 1998; Shimamura, 2000; Wenden, 1998, 2002).

In the case of L2 listening comprehension, metacognitive knowledge is thought to include L2 listeners' general knowledge about human factors (such as cognitive and affective variables) which facilitate or inhibit their L2 listening comprehension, and their specific knowledge of how these factors apply in their experience of L2 listening (including their perception of the difficulty presented by L2 listening, their perceived ability as L2 listeners, and their general self-efficacy beliefs). Current conceptions of L2 metacognitive knowledge also encompass listeners' abilities to assess the nature, purpose, and demands of a listening task, including the knowledge, skills and strategies required (Goh, 1997, 2000; Wenden, 1998, 1999, 2002). There is convincing evidence that metacognitive knowledge significantly influences not only

cognitive processing – including the efficiency of working memory – but that metacognition may also be a prerequisite to self-regulation (Butler & Winne, 1995; Fernandez-Duque, Baird & Posner, 2000a,b; Shimamura, 2000). Chamot et al. (1999) suggested that:

“When listeners know how to (a) analyze the requirements of a listening task; (b) activate the appropriate listening processes required; (c) make appropriate predictions; (d) monitor their comprehension; (e) problem-solve to guess the meaning of what they do not understand; and (f) evaluate the success of their approach, they are using metacognitive knowledge for successful listening comprehension”.

It seems clear, then, that the metacognitive knowledge applied by the listener will play a fundamental role, not only in the pre-listening processing phase previously described, but in each one of the L2 listening comprehension phases, and at all levels of L2 listening comprehension fluency.

#### **2.1.2.2 Perceptual phase**

Perceptual processing is the encoding of the acoustic message. It involves segmenting phonemes from the continuous speech stream, relating the sounds of the incoming signal to the mentally represented sound categories of the language, and retaining the sounds in echoic memory. Current psycholinguistic theory accepts that speech input automatically activates all words with which it is compatible, and that word recognition occurs via a process of competition between the activated candidates (Field, 1999; Norris, Cutler, McQueen & Butterfield, 2006); in this view, segmentation is a product of the word recognition process (Cutler, 2000).

There is abundant evidence that segmentation of speech relies on language-specific

procedures. Cutler and her colleagues, for example, have provided evidence of a segmentation heuristic which native English-speaking listeners apply to speech input: they have a significant tendency to posit erroneous word boundaries before strong (stressed) syllables rather than before weak syllables, and a corresponding tendency to overlook boundaries before weak syllables. This tendency likely results from the fact that most content words in English begin with strong syllables (Cutler, 2000). Rhythmic effects in the segmentation of speech have been documented in languages which, conversely to English, do not have a stress-based metrical structure. In the case of French, for instance, research has provided evidence of syllabically-based segmentation. Rhythmic effects in segmentation appear to be restricted to the language-specific rhythmic structure to which listeners are attuned in their native language. The fundamental consequence and potentially serious problem resulting from these findings is that “nonnative listeners do not segment speech the way native speakers of a given language do”, and “they may apply their native strategy to the nonnative language” (Cutler, 2000); this tendency can prove detrimental to perception and comprehension, particularly in the early stages of language learning, and up to relatively advanced levels of L2 proficiency (Delabatie & Bradley, 1995; Lynch, 1998; Lynch & Mendelsohn, 2002).

During the perceptual processing stage, working memory is constantly cleared for new input, and unless some form of association or fixation in memory occurs immediately, the information can be wiped from the listener’s memory (Goh, 2000, 2002a; Just & Carpenter, 1992; Sparks & Ganschow, 2001). Consequently, successful listening comprehension – particularly at lower levels of fluency – requires that directed and selective attentional strategies be deliberately and rigorously sustained, in order to maintain concentration on the

continuous speech stream, to resist distraction, and to redirect attention when necessary.

There is extensive evidence that successful L2 listeners are less easily distracted than are less successful listeners, and that they are more able to keep up with the continuous speech stream, to consciously maintain or redirect attention, and to effectively store larger chunks of the speech stream perceived (Bacon, 1992a,b; Vandergrift, 2003a).

By contrast, less successful L2 listeners frequently focus excessively on individual segments. This excessive attention to particular segments can have highly detrimental effects on language learners' overall listening comprehension (Goh, 2000; Vandergrift, 2003a,b), as it influences their ability to perceive all segments, as well as their ability to retain segments in memory. Among many interacting factors (Goh, 2000; Rubin, 1994), the semantic, syntactic and contextual difficulty of the acoustic message (Field, 1998), its length, and the characteristics of the acoustic message, such as the clarity of articulation, prosody features such as rhythm and lexical stress (Field, 2005; Lindfield, Wingfield & Goodglass, 1999), the position (Hoeflaak, 2004) and frequency of pauses, the register, propositional density (Lynch, 2002), content redundancy (Lynch & Mendelsohn, 2002), the speech rate (Lynch, 1998; Zhao, 1997), and accent familiarity (Munro, Derwing, & Morton, 2006) influence L2 listeners' attentional capabilities and the efficiency of their perceptual processing.

This influence exerts itself in varying measure depending upon, among many factors, the listener's L2 proficiency level, the speed and accuracy of sound-to-script and word-referent relationships (Wilson, 2003), the comprehensiveness and depth of the lexical knowledge (Field, 2003; Segalowitz, 2000), the phonological, prosodic, and morphological relatedness

of the L1 and L2 (Dufva & Voeten, 1999; Lindfield et al., 1999), the strategic processing capabilities (Eastman, 1993; Goh, 2000; Lynch, 1997; Wilson, 2003), and the listener's perception of and attitude towards the accentedness in the speech (Munro et al., 2006). The meaningfulness and utility assigned by the L2 listener to the acoustic message, the purpose of the listening, the level of difficulty perceived, and the efforts, confidence, and persistence deployed by the listener also influence attentional capabilities and the efficiency of perceptual processing (Goh, 2000; Vandergrift, 2003a). Moreover, there is extensive evidence that the listener's native language (NL) skills – in particular the NL word recognition and phonological memory skills – also play fundamental roles in the perceptual processing stage of L2 listening comprehension (Dufva & Voeten, 1999; Lindfield et al., 1999; Sparks & Ganschow, 2001).

### **2.1.2.3 Parsing phase**

During the parsing phase, words are transformed into a mental representation of the combined meaning of these words, by segmentation of utterances according to syntactic structures, or cues to meaning (Goh, 2000). The basis for chunking and the size of the segments will vary among individuals, depending in particular upon their L2 proficiency level, the contextual and extralinguistic support provided within the acoustic input (Goh, 2000), the “intrinsic cognitive difficulty” of the text (Brown, 1995), the phonological and morphological relatedness of the listeners' L1 and L2 (Lynch, 1997; Sparks & Ganschow, 2001), their general knowledge (Long, 1990), and their strategic processing capabilities. There is convincing evidence that, at beginner levels of linguistic proficiency, L2 listeners principally parse content words, and that the ability to parse function words emerges later in

L2 listening (Eastman, 1993). There is also convincing evidence that, at lower levels of proficiency, L2 listeners are forced to devote considerable resources to lexico-grammatical processing, which privileges lower-level processes at the expense of higher-level processes (Zwaan & Brown, 1996, cited in Lynch, 1998).

In the final steps of the parsing phase, the segments are recombined to generate a meaningful proposition. Unless the information is processed in a deep and meaningful way, it can be quickly forgotten (Gernsbacher, Varner & Faust, 1990; Goh, 2000). There is extensive evidence that less successful L2 listeners frequently do not process texts semantically in a deep and meaningful manner, and that they have difficulty maintaining in memory even those segments which were accurately perceived and understood (Eastman, 1991; Goh, 2000; Vandergrift, 2003a). At the early stages of language learning, this appears to be due in large part to the fact that, when low-level processes such as sound-script and word-referent processing have not yet been sufficiently developed, there remains little mental capacity available for the higher level processing which forms meaningful associations with existing knowledge in long-term memory (Call, 1985; Just & Carpenter, 1992; Lynch, 1997; Segalowitz, 2000; Wilson, 2003). A related reason is that, due to the recursive nature of listening comprehension processes, mental representations from successful parsing can easily be displaced by new input before these mental representations can be utilized (Gernsbacher et al., 1990; Goh, 2000).

In parsing, novice-level L2 listeners frequently have to rely in large part on elaboration, inferencing and transfer (to the extent that the relatedness between their L1 and L2 allows), to overcome their limited linguistic knowledge, by using cognates (if the L1/L2 relatedness

permits it) and extralinguistic cues, to construct the meaning of an acoustic message (Field, 1999, 2004; Vandergrift, 1997, 2003a). There is strong evidence that chunking and inferencing strategies play an important role in parsing L2 acoustic input. More successful listeners tend to be able to process larger chunks of input, and to be more frequently successful in inferencing the unknown from the context using a top-down processing approach.

By contrast, less successful L2 listeners tend to segment speech streams word-by-word, using chiefly a bottom-up approach (Bacon, 1992a,b; Vandergrift, 2003a,b). Although ‘less skilled’ L2 listeners’ over-reliance on bottom-up processing has traditionally tended to be ascribed to poor strategy use, or insufficient strategic knowledge (O’Malley & Chamot, 1990), there is convincing new evidence that top-down and parallel processing in L2 listening are difficult skills, which are acquired slowly and incrementally (Field, 1999, 2003; Wilson, 2003). A number of researchers have argued that it may simply be unreasonable to expect L2 listeners – even at the intermediate level – to consistently make efficient use of their higher-level cognitive processes before they have solved all of their lower-level problems first (Alderson, 1984; Schoonen et al., 1998; Wilson, 2003). Nonetheless, it should be noted that some researchers (most notably Field) have consistently argued that studies have also tended to under-estimate lower proficiency L2 listeners’ use of top-down processing. In Field’s view, “bottom-up dependency may have been a product of instructional methodology and may never have been characteristic of real-life listening”, and “top down information is likely to be used more rather than less by lower level learners”, “*compensatorily*”, to compensate for an inability to recognize words in the speech stream or from limitations of vocabulary or syntax (Field, 2004, p. 368-369).

#### 2.1.2.4 Utilization phase

In the third processing stage, utilization, the mental representation formed in parsing is related to existing knowledge, and stored in memory as propositions or schemata, to assist comprehension and recall (Goh, 2000; O'Malley & Chamot, 1990).

While the perceptual processing and parsing phases can be particularly difficult at the beginning stages of L2 listening, the utilization processing stage has been found to cause difficulties and misinterpretations even at advanced levels of L2 proficiency (Goh, 2000, 2002a). This appears to be the case because, even at higher levels of linguistic proficiency, many L2 listeners reach the utilization processing stage having retained only a minimal portion of the original acoustic message in memory (Goh, 2000, 2002a). Their often incomplete and uncertain understanding of the message requires that they resort to a careful summarization of all of the input perceived, and to a rigorous evaluation of the accuracy of their auditory perception and parsing, at the phonological, semantic, syntactic, contextual, discourse, and socio-pragmatic levels. L2 listeners must then proceed to an accurate final selection of the relevant parts of the perceived input, based on the contribution of each perceived segment to the overall intended meaning perceived in the message. They must then verify the original hypotheses formed in parsing on the basis of this selection and, through attentive analyses, attempt to deduce the meaning of segments which remain ambiguous – based on their linguistic and general knowledge, as well as on logical reasoning – in order to ascertain that none of their interpretations conflict with their earlier hypotheses, all of this, *on-line*, in *real-time* processing.

The identification of any new ambiguity which could bear on the overall perceived meaning of the message heard, or of any contradiction to the hypotheses formed, requires a return to the point of conflict identified, and the initiation of a new cycle of each one of the utilization processing steps. Even at higher levels of L2 proficiency – depending in particular on the difficulty presented by the content of the acoustic message for the L2 listener and on the purpose of the listening – every step of this third stage of processing may need to be cyclically repeated throughout the reception of the speech stream and at the end of listening, in order to reach an appropriate interpretation of the message heard (Goh, 2000, 2002a; Mareschal, 2002; Vandergrift, 2003a,b). There is extensive empirical evidence that the skills and strategies which L2 listeners deploy at this particularly complex and cognitively demanding stage of listening can significantly influence their comprehension. In particular, combined bottom-up and top-down processing in the utilization stage appears to be an indispensable condition for fluent, accurate L2 listening comprehension, especially at lower levels of linguistic proficiency (Lynch & Mendelsohn, 2002).

Frequently however, insufficient linguistic, discourse, socio-pragmatic, or background knowledge to generate the relevant schema can significantly limit a L2 listener's ability to use strategies such as inferencing. This particular strategic process has been established as crucial to comprehension, in particular when perception has been minimal and parsing uncertain (Goh, 2000, 2002a; Lynch, 1998; Lynch & Mendelsohn, 2002; Mendelsohn, 1998). There is extensive evidence that more effective L2 listeners are able to use top-down and bottom-up processing strategies interactively in a more efficient manner, whereas less effective L2 listeners are frequently limited to excessive use of bottom-up processing

(Vandergrift, 2003a). Excessive reliance on a word-by-word decoding technique has been extensively documented as detrimental to L2 listening comprehension, as it frequently leads to errors in transfers and translations (Eastman, 1991).

In the utilization phase, as in parsing, the L2 listener's ability to efficiently suppress irrelevant or redundant information from the speech stream has emerged as a crucial factor in successful comprehension (Kintsch, 1998, cited in Vandergrift, 2003a; Vandergrift, 1997). Suppression allows the L2 listener to focus on the direction in which the communication is evolving. Poor skill in suppressing irrelevant information can affect fluency, since attention will be diverted, thereby reducing processing speed, interrupting fluidity, and compromising the accuracy of the L2 listener's interpretation (Segalowitz, 2000). Similarly, there is abundant evidence that excessive attention to individual unfamiliar words can seriously hinder L2 listeners' comprehension, particularly at lower levels of proficiency (Goh, 2000).

There is strong evidence that effective L2 listeners make use of the strategies of monitoring, elaboration and inferencing in ways which are qualitatively different from those of less successful listeners. In their deployment of these strategies, effective L2 listeners have been consistently documented to more systematically and more flexibly draw upon a wider range of available comprehension sources, in particular upon general knowledge and self-questioning. There is also extensive evidence that effective L2 listeners more systematically and more flexibly support the reasoning drawn from their monitoring, inferences and elaborations, with self-evaluation strategies. The deployment of self-evaluation strategies – concurrently and/or subsequently to monitoring, inferencing and elaborations – can significantly influence L2 listening comprehension success (Mareschal, 2002; O'Malley et

al., 1989; Rivers, 2001; Vandergrift, 2003a). Field (2004) provided convincing evidence that, at lower levels of proficiency, L2 listeners' frequently make "a rough attempt at one-to-one match with a known item which potentially overrules contextual information and modifies perceptual" (Field, 2004, p. 373). The same observations were made by Wu (1998). As Field (2004) pointed out, this processing approach which, strictly speaking, qualifies as 'top-down' processing, highlights the fact that 'higher-level processing' does not necessarily lead to successful L2 listening comprehension, but that rather, it can seriously mislead listeners.

Finally, there is abundant evidence also that, at all processing phases of L2 listening comprehension, listeners' perceptions, beliefs, attitudes, motivation and their ability to control anxiety can significantly influence their strategy use and performance (e.g. Benson & Lor, 1999; Dörnyei, 2005; Dörnyei & Skehan, 2003; Ehrman, Leaver & Oxford, 2003; Horwitz, 1988; Larsen-Freeman, 2001; Mori, 1999; Oxford & Nyikos, 1989; Robinson, 2002; Ushioda, 1996, 2000, 2006; Vandergrift, 2005; Yang, 1999; Zhang & Goh, 2006).

This brief overview of current knowledge of the listening comprehension process in a second or foreign language illustrates the extent to which successful L2 listening comprehension – particularly at lower levels of language proficiency – entails an actively directed and highly dynamic recursive process of auditory discrimination, concentration, memory, analysis, construction of meaning, problem-solving, and evaluation in which metacognition, strategy use, lexical knowledge, and numerous other factors interplay in important and complex ways.

### 2.1.3 Interrelationship of metacognition and self-regulation in general learning and academic achievement

As was previously mentioned, there is convincing evidence that the metacognitive knowledge applied by the L2 listener likely plays a fundamental role in each of the L2 listening comprehension phases previously described, at all levels of L2 listening comprehension fluency.

Furthermore, there is compelling evidence that metacognition likely is a prerequisite to self-regulation (Butler & Winne, 1995; Fernandez-Duque, Baird & Posner, 2000a,b; Shimamura, 2000). Neither a mental ability nor an academic performance skill, *self-regulation* refers to the self-directed process through which students act as metacognitively, motivationally, and behaviorally active participants in their own learning. In numerous subfields of educational research, this deliberate, judgmental, and adaptive process has been established as enabling learners to act more effectively when encountering academic tasks (Boekaerts, Pintrich & Zeidner, 2000; Tseng, Dörnyei & Schmitt, 2006; Wenden, 1999; Zimmerman & Schunk, 2001).

In most conceptualizations of self-regulated learning (e.g. Eilam & Aharon, 2003, or Winne, 1995, 1996, 2001), *self-regulated learners* are aware of what they know, what they believe, and what the differences between these kinds of information imply for approaching tasks. They draw on their knowledge and beliefs to construct an interpretation of the task, and they set goals for extending knowledge and sustaining motivation. They have a grasp of their motivation, are aware of their affect, and plan how to manage the interplay between these

factors in their approach to a task. Such learners deliberate about the skills and strategic processes which might be best suited for attaining their goals, and judge performance success in comparison with those goals. They perceive cues accurately, examine the strategies they have selected in light of their achievements, and adjust their activities accordingly. At the same time, these learners manage the interplay between the cognitive and affective aspects of their behaviour during engagement with the task, sustaining motivation when encountering obstacles.

Research on academic self-regulation has established that students' self-regulatory beliefs and processes are not only measurable, but are highly correlated with academic achievement, whether these two factors are measured using grade point average, achievement track in school, standardized tests, or task-specific measures. An abundance of studies, in numerous fields of research, have also demonstrated that it is possible to teach self-regulated learning processes, and that these processes can significantly enhance students' achievement (Boekaerts, 1999; Boekaerts, Pintrich & Zeidner, 2000; Bolitho et al., 2003; Ehrman, 2000; Purpura, 1997, 1998; Winne, 1995, 2001; Zimmerman, 2000; Zimmerman & Risemberg, 1997).

As Wenden (1999) explained, learners' metacognitive knowledge has been shown to influence two key phases in self-regulation: task analysis and monitoring. Metacognitive knowledge is considered to be key to the task analysis that constitutes pre-task engagement planning, when learners call upon their acquired knowledge about learning and their beliefs about a particular task to (1) identify the nature of the problem it poses, (2) consider whether it presents analogies with previous tasks, and (3) determine how to approach the task, and the

knowledge and skills needed to accomplish the task. Wenden further explained that metacognitive knowledge is also considered to be:

“centrally involved in monitoring, the regulatory skill that oversees the learning process that follows the initial planning. It is the basis for determining how one is progressing, and it is what constitutes the internal feedback, i.e. the state of awareness which lets a learner know that he/she has encountered a problem. Learners’ assessments of the reasons for problems encountered and their decisions about how to deal with these problems are also based on their metacognitive knowledge” (Wenden, 1999, p. 437).

In the case of language learning, self-monitoring training, for example, has been found to enhance performance across a wide variety of academic measures, including the rate of assignment completion, time on task, conversational skills, problem-solving, and writing accuracy, in addition to enhancing self-efficacy (Zimmerman & Risemberg, 1997). Training in process goal-setting, progress feedback and self-evaluation has similarly been found to enhance performance across a wide variety of academic measures, such as writing achievement, self-evaluated learning progress, and self-regulated strategy use, in addition to enhancing self-efficacy and motivation (Schunk, 2001; Winne, 2001).

The preceding overview of current knowledge of the L2 listening process highlighted the numerous difficulties which are associated with the acquisition of this complex skill. The following section examines pedagogical attempts to facilitate the acquisition of this complex skill for language learners.

## **2.2 Pedagogical approaches to listening skills development**

McLaughlin and his collaborators remarked that: “Second language learning is a complex

phenomenon and there are many legitimate points of view. The trouble begins when one starts to claim that a particular point of view is the total one.” (McLaughlin et al., 1983, p. 156). Regrettably, as Lynch explained: “As in other areas of language teaching, the teaching of listening has been prone to pendulum movements of theory, ‘evidence’, and fashion. In the case of listening, the swing has been from a focus on linguistic processing to a preoccupation with schematic processing, or as Field (1998) put it, from ‘skills’ to ‘strategies’ ” (Lynch, 2002, p. 45-46). In this paper, Lynch cites the example that:

“The first edition of *Listening to Spoken English* (Brown, 1977) devoted 150 pages to the linguistic features of natural speech and ten pages to the teaching of comprehension. This contrasts sharply with a recent teacher education text (Mendelsohn, 1994) that acknowledges Brown’s influence but adopts a strategy-based approach to listening: It presents a rationale for a listening course in which only one unit is devoted to ‘linguistic proficiency’ (the ability to cope with word boundaries, weak forms, elision, assimilation, and so on) and all the others concentrate on fostering strategy use and ‘metastrategic awareness’. ” (Lynch, 2002, p. 46).

As argued by Field (1998, 2000, and cited also in Lynch, 2002) and a number of other SLA researchers (e.g. Hulstijn, 2003), the mainly strategic approach to teaching listening may have been taken too far, and a better balance should perhaps be struck between skills and strategy development. This view appears particularly pertinent in light of the fact that attempts to facilitate language learners’ acquisition of effective listening skills by teaching them selected strategies one by one have frequently produced disappointing results or have proven insufficient (Cornaire, 1998; Dörnyei, 2005; Dörnyei & Skehan, 2003; Field, 1998, 2007; Vandergrift, 2004).

In the case of L2 listening comprehension, very little is known about the precise interrelationships which might exist between, on the one hand, language learners’

metacognitive awareness and self-regulation and, on the other hand, their strategy use and success in L2 listening comprehension (Wenden, 2002). Listeners' *self-regulatory abilities*, in particular, have not traditionally been taken into account in investigations of L2 listening comprehension.

In a number of learning contexts such as the one where the research reported in this study was conducted, language learners are still expected to acquire listening skills by osmosis, as was the norm until the not too distant past. In a number of other language learning contexts, as Field (1998), for example, observed:

“A conventional listening comprehension lesson simply adds yet another text to the learners' experience; it does little or nothing to improve the effectiveness of their listening or to address their shortcomings as listeners. Learners may have experienced difficulties at certain points of the listening text. These are attended to in terms of the language and meaning of the text, but no attention is paid to what may have gone wrong in the process of listening. Hence the likelihood that, confronted with a similar text next time, learners will use the same, unsuccessful techniques. They will not have improved as listeners. Under the present 'comprehension' approach, success in listening comprehension is measured by correct responses to questions or tasks. Teachers focus on the outcomes of listening, rather than upon learning itself, upon product rather than process.”.

Field (1998) suggested that the aim of strategy training should be “to encourage the reluctant strategy-user and restrain the rash”, and that, rather than being taught individually, strategies and other listening skills should be incorporated into the pattern of listening lessons. He suggested that activities undertaken in the classroom should also incorporate the formation and testing of informed guesses, with a view to ensuring that learners come to accept this process as normal, and not as a mark of their inadequacy as L2 listeners. Field proposed that some of the listening lessons could adopt the following sequence:

1. After a first listen to a section of text, learners could write down as many words as possible from the speech stream, and evaluate how certain they were about each one.
2. They could then form guesses as to the ideas which might link these words, making use, in particular, of their knowledge of the world, of the topic of the text, of the speaker, of the text thus far, and of similar speech events. They could then share their guesses with a fellow learner.
3. The same section of text could then be played again, in order that the learners could check their guesses concerning that particular section of the text.
4. The next section of the text could then be played, in order that learners could verify their guesses against that particular section of the aural text.

(adapted from Field, 1998, p. 116)

Field suggested that stages 3 and 4 were particularly important, because “the failure to check hypotheses seems to be the source of much breakdown of understanding in foreign-language listening, when guesses become treated as certainties instead of being weighed against new evidence as it comes in”.

Goh (2000, 2002a,b), Goh & Taib (2006), Hoeflaak (2004), Hulstijn (2003), and Vandergrift (2002, 2003a) are among a growing number of researchers who have suggested and empirically investigated listening development pedagogical tasks which are very similar to those suggested and reiterated by Field (1998, 2007). The first evidence from this recent research into the effects of combined bottom-up *and* top-down / metacognitive / strategic awareness-raising and self-regulation development on language learners’ listening comprehension development is very encouraging.

Vandergrift et al. (2006), for example, reported that listening tasks which guide students through the process of listening by engaging them in the use of prediction, monitoring, evaluation and problem-solving can help learners develop the metacognitive and strategic knowledge critical to the development of self-regulated listening. In two investigations by Vandergrift using this teaching sequence, students were guided in the use of prediction, individual planning, peer-discussions and post-listening reflections. Both beginner-level elementary school students (Vandergrift, 2002) and beginner-level university students of French (Vandergrift, 2003b) exposed to such an approach found it motivating to learn to understand rapid, authentic-type texts. Students commented on the power of predictions for successful listening, the importance of collaboration with a partner for monitoring, and the confidence-building role of this approach for enhancing listening comprehension ability. Vandergrift's sequence for guided listening was adopted for teaching tertiary-level Chinese ESL students, and these learners also reported increased motivation, confidence and strategic knowledge (Liu & Goh, 2006).

### **2.3 Concluding remarks**

As Rost summarized it:

“Listening has rightly assumed a central role in language learning. The skills underlying listening have become more clearly defined. Strategies contributing to effective listening are now better understood. Teaching methodology [however], in the mainstream, has not yet caught up with theory. In many language curriculums, listening is still often considered a mysterious ‘black box’, for which the best approach seems to be simply ‘more practice’. Specific skill instruction as well as strategy development still need greater attention in order to demystify the listening process.” (Rost, 2001, p. 13).

Graham's (2006) recent investigations into language learners' experience of L2 French listening comprehension in the U. K. suggest that, as observed for example by Chambers (1997) ten years ago, in many cases, L2 listening development remains principally a *test* of comprehension, in which learners listen to a text and complete an accompanying exercise, the correction of which is the final stage of the listening process (Graham, 2006, p. 170). Graham's study suggests that, as a result, in many cases, L2 listening comprehension is the skill in which students feel they have achieved the least. Equally regrettable is the fact that many language learners – as those in Graham's study – attribute their difficulties in listening to what they perceive as their low ability or the high difficulty of the listening texts or tasks, with little awareness or understanding of the role played by their ineffective strategy use or skills. Graham argued that “such attributions indicate a sense of passivity and helplessness in learners” which could easily result in their becoming “demotivated, resigned to being less effective listeners”. She concurs with Field (2000, p. 187) that offering language learners who find listening difficult “more listening passages will simply add to their sense of failure”. Rather, Graham suggests that “learners need to feel a sense of control over their listening, [they need to feel] that improvement is possible”. She posits that “there is thus a need for language teachers to address both how their students listen, and their beliefs about listening comprehension and about themselves as listeners” (Graham, 2006, p. 178).

With the central pedagogical problem needing resolution now identified, the crucial question is: *How* could this problem best be addressed?

Goh's authoritative investigations, over the past decade (e.g. 1997, 1998, 2000, 2002a,b), into L2 listeners' comprehension problems – and into the relationship between listeners'

metacognitive knowledge and their listening skills – provide a detailed theoretically- and empirically-based action plan in answer to the problems and challenges identified in this review of L2 listening comprehension research.

In her 2000 publication for instance, Goh reported that, in the early stages of language learning, “the weaker listeners in [her] studies appeared to be caught between perception and parsing, with few opportunities to process the information at a higher cognitive level”.

Similarly to Field (1998), Goh argued that, in these circumstances, it is “absolutely crucial that we include practice activities that help learners overcome or cope with such difficulties, so that they can have better control over their listening comprehension. However, to get the most out of these activities, [Goh added that] we need first to identify our students’ listening problems” so that each specific problem can be dealt with. “By concentrating on those areas that affect their comprehension most, [this researcher argued that] we can use limited teaching time more profitably” (Goh, 2000, p. 69).

Goh posited that one way to obtain this information is to ask learners to reflect on the problems they experience during specific listening events (through the use of listening diaries or process-based discussions, for example). Goh explained that, in her studies, this reflection process has proven to be very useful, because it:

“... revealed cognitive difficulties that otherwise would have remained largely hidden. This introspective approach to understanding learners’ listening difficulties also has many practical benefits. The problems revealed can provide insights into how well learners apply listening strategies to help them deal with comprehension difficulties. Learners who repeatedly complain about low-level perception problems probably do not engage sufficiently in top-down processing... Learners who are fixated on unfamiliar words are probably unaware of the importance of monitoring and directing their attention so that they could continue to receive input in spite of some temporary setbacks.”.

Goh argued that, if they possess the relevant background knowledge, learners can, for example, be persuaded to settle for some ambiguity by applying top-down strategies that can help them get a general sense of the message; they can also be taught how not to be fixated on difficulties, but instead, to continue to listen to other parts which might provide some clues or clarifications. Goh argued moreover that this regular listening practice assists learners in becoming more sensitized to the sounds of the target language (see Goh, 2000, pp. 70 to 73).

Similarly to Graham (2006) and Lynch (1996), Goh noted that some listeners have a tendency to blame themselves whenever they cannot understand what they hear, while other listeners blame their failure to comprehend on external factors, such as vocabulary, accent and speech rate. Goh argued that:

“... by encouraging learners to consider the difficulties they experience while listening to the target language, we get them to think about how their cognitive processes could be affected and when comprehension could potentially break down... Moreover, by asking them to focus on their individual problems, we help them to view their overall sense of listening difficulty in terms of mental processes that can be dealt with systematically... [we help them to] develop a more balanced view about their listening comprehension. Instead of taking on all the blame or shifting it entirely to the speaker or the text, they might see that listening comprehension is a very complex issue and involves many factors.”

Goh further posited that:

“... when learners speculate on the causes of these difficulties, they could be prompted to consider how these difficulties could be dealt with realistically. This increased metacognitive awareness about their learning processes could cause them to take a more active part in overcoming some of their listening difficulties, rather than accept all their problems as unavoidable and insurmountable.” (Goh, 2000, p. 73).

In his recent review of research on autonomy in teaching and learning (whose practical applications focus on self-directed / self-regulated learning), Benson (2006) pointed out that, with the advent of ‘self-access centers’, CALL (computer-assisted language learning), and other forms of learning beyond the classroom, what Allwright (1988) termed the ‘radical restructuring of language pedagogy’ has become a reality with which many language teachers – and learners – must now come to terms (Benson, 2006, p. 22). This reality is an additional reason why it is imperative to find effective means by which language instructors could facilitate their students’ acquisition of listening skills and gradually guide them toward confidently and competently taking control of their own listening skills development. Goh’s (e.g. 2000 and 2002a,b) theoretically- and empirically-founded pedagogical recommendations offer great promise to meet this challenge.

#### **2.4 Research questions**

In light of the importance of listening skills in language acquisition, the many difficulties facing L2 listeners in the early stages of language learning, the important unanswered questions in the field of L2 listening research, and the promising new evidence cited previously, this study investigated the three following questions:

- 1 What are the effects of a self-regulatory approach to L2 listening instruction on language learners’ (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension?

- 2 Are there interrelationships between language learners' metacognitive awareness, self-regulatory abilities, listening comprehension strategy use, and their overall success in listening comprehension? If so, what are these interrelationships?
- 3 What are language learners' perceptions and attitudes towards a self-regulatory approach to L2 listening comprehension development?

The following chapter describes the methodological design adopted to investigate these questions.

## Chapter III

### Methodology

#### 3.0 Introduction

“What is important for researchers is not the choice of a priori paradigms, or methodologies, but rather to be clear about what the purpose of the study is, and to match that purpose with the attributes most likely to accomplish it. Put another way, the methodological design should be determined by the research questions.” (Larsen-Freeman & Long, 1991, p. 14)

Following Larsen-Freeman and Long’s recommendation, which has been endorsed by a number of L2 methodologists (e.g., Lazaraton, 1995), the research design for this study was guided by a consideration of the relative contribution that the various methodologies suited to L2 listening research could make to answering the research questions. An *interpretive qualitative* case study design – as conceived and defined by Davis (1995) – appeared well suited to the purposes of this study, and could provide for methodological rigor in data collection, analysis, and reporting. To this aim, questionnaires, stimulated recalls, semi-structured interviews, think-alouds, listening note-books, summative reports and observation were combined, to elicit data from two groups of adult learners of French at different levels of L2 proficiency and general ability.

This chapter begins with a summary of Davis’ (1995) recommendations for L2 qualitative case study design. This is followed by a description of the research context, participants, and pedagogical method investigated, followed by a review of the data collection instruments used. The chapter concludes with a description of the data analysis procedures.

### **3.1 Methodological design adopted for this case study**

In the *interpretive qualitative* research design (Davis, 1995) followed in this study, theory and method are bound tightly together in conducting and reporting the research. Studies both inform and are informed by theory in the process of conceptualizing, conducting, analyzing, and interpreting the research. The conceptual framework not only works as a guide to the actual conduct of the study, but it also informs the researcher and the future reader of what has been done in the area under investigation, what has been left out, and how the current study may contribute to knowledge. In this way, the conceptual framework suggests the overall questions which the researcher is attempting to answer through the study. The research questions are broad enough to allow for a range of explanations that take into account the particular meanings which all participants within a situation give to that situation (a holistic and emic perspective), but narrow enough to be addressed during the time frame available for the study. The particular methods used during the various stages of the research process are both instrumental and goal-driven. Methods are instrumental in that they are designed to obtain data from an emic perspective while ensuring credibility and dependability. Methods of data collection, analysis, and especially interpretation are also utilized with the goal of generating theory. In so doing, researchers are expected to carefully examine and control how their particular theoretical and experiential frames of reference may inform but also affect the investigation. Given, once again, the emic and holistic nature of the interpretive qualitative research enterprise, the researcher is also expected to take into account “all relevant and theoretically salient micro and macro contextual influences that

stand in a systematic relationship to the behavior or events one is attempting to explain” (Watson-Gegeo, 1992, cited in Davis, 1995).

One essential procedure to ensure research credibility in an interpretive study is to triangulate by using multiple sources and methods of investigation. The multiple methods of data elicitation allow for another fundamental requirement of interpretive studies as conceived by Davis: the search for patterns of generalization across multiple sources of data including, typically, interviews, observations, and documents. In order for descriptions of interpretive qualitative research findings to be credible, they must provide richness of detail (particular description), establish the generalizability of findings within the study (general description), and offer analyses of the meaning of actions from the perspective of the actors in the events (interpretive commentary) (Erickson, 1986, cited in Davis, 1995).

Davis’ (1995) guidelines are perfectly consistent with more recent conceptions and recommendations for criteria pertaining to qualitative interpretive case studies such as those outlined by Brown & Rodgers (2002), Chapelle & Duff (2003), Chaudron (2000), Creswell (1998, 2002), Edge & Richards (1998), Fraenkel & Wallen (2003), Lazaraton (2003), and Mackey & Gass (2005).

In light of the multiple complex factors influencing L2 listening comprehension, and given the limits of the instruments available to investigate these chiefly *covert* processes, a comprehensive multi-source, multi-method schedule of cyclical data collection as recommended by Davis appeared best suited to document the research questions with detail and rigor.

## **3.2 Description of the research design**

### **3.2.1 Research context and participants**

#### **3.2.1.1 Research context**

In Canada, where this study was conducted, specific levels of bilingualism in French and English are mandatory in order to qualify for particular categories of federal government employment. To assist its employees in attaining required levels of bilingualism, the Canadian government will often place these employees on a remunerated leave of absence, and provide them with daily, intensive, all-day language training, over the course of the required number of weeks or months, at one of its several special language training centers across the country. This case study was conducted at one of these Canadian federal government French language training centers. At these language centers, instruction is typically organized in small groups of four to eight students with two instructors: a main instructor (referred to as P1) providing four and a half hours of the daily instruction, alternating with a second instructor (referred to as P2) providing two and a quarter hours of the daily instruction. Every few weeks, as they progress through their language training, students are assigned to new groups and new instructors.

The participating institution was chosen by the researcher because it was judged that (1) its intensive language learning context could allow for relatively extensive documentation of the experimental listening approach and related factors of interest in this research over the period of time available for the study, and (2) mandatory adult L2 learning provided an interesting

and challenging context in which to examine the experimental pedagogical approach. The researcher had no prior acquaintance with the language center where the study took place, nor with any of the instructors or students who participated in this study.

The study was conducted over a period of twelve weeks, from April to July 2004 (see Appendix I for copies of the ethics certification and participant consent forms). At that time, the curriculum at the participating institution did not include any specific listening development activities.

### **3.2.1.2 Research participants**

#### **3.2.1.2.1 Instructor participants**

Instructor and student participation in the study was entirely voluntary. At a recruitment meeting, a number of instructors from the participating institution expressed an interest in taking part in the study. The first two P1 instructors to formally confirm their intention to participate were retained. This selection process was additionally made possible by the fact that their respective students (1) were at proficiency levels where listening development exercises could potentially still be beneficial to them, (2) could potentially provide interesting comparative data of learners assessed by the participating institution as high-achievers versus learners assessed as low-achievers, (3) were expected to remain in their specific groups for a period of twelve weeks (the approximate period of time available for this study), and (4) their students were willing to participate in the study.

Three instructors took part in this study: the P1 instructor for a group of beginner - intermediate level students, and the P1 and P2 instructors for a group of intermediate level students. Both P1 instructors were native francophone speakers. The P2 instructor – in the intermediate level group – had a near-native command of the French language. The length of teaching experience at the participating institution of these three instructors ranged from five to twenty years. None of the participating instructors had any prior specialized knowledge of L2 listening comprehension research, or any experience with explicit L2 listening instruction.

#### **3.2.1.2.2 Student participants**

Eight native anglophone language learners from two separate classes participated in this study. The students from both groups were between 35 and 45 years of age, and French was an L2 – understood here in its strict meaning of the very first non-native language learnt – for all participants. Five of the participants, assessed by the institution as ‘low-achievers’ (at the level D, based on their language proficiency test scores), were in a beginner-intermediate level class (henceforth referred to as the LP Group); these five participants constituted the entire class. The three other participants, assessed by the institution as ‘high-achievers’ (at the level A, based on their language proficiency test scores), were in a ‘fast-track’ intermediate level class (henceforth referred to as the HP Group). This second group was composed of a total of six students (the three non-participants were learning French as an additional foreign language, rather than an L2).

The assignment of the students in the beginner-intermediate class to a low-proficiency D

level group, and that of the students in the intermediate group to a fast-track A level high-proficiency group were based upon these learners' respective test scores in the Pimsleur (parts 5 and 6) and MLAT language aptitude tests, as well as upon their responses to learning styles inventories, and upon the findings from a 90 minute placement interview aimed at further determining the learners' aptitudes for French language learning. At the time of the present study, level A, at the participating institution, was the highest language aptitude level at which a student could be assessed to be (4 to 5 % of the learners had been assessed to be at the level A). At the other extreme, Level D was the lowest language aptitude level at which a student could be assessed to be (approximately 15 % of the learners were in level D groups at the time of this study). Students assessed to have very low language learning aptitudes, and who were therefore placed in level D groups, were accorded more than double the length of time given to the higher-ability A level students to complete their required French language learning.

Tables 3.1 and 3.2 present the profile of the low- and high-proficiency groups which took part in this study, as reported by the students in the initial interviews: their educational background, prior French instruction and general exposure to the French language, and out-of-class exposure to French at the beginning of the study. To preserve the confidentiality of their identity, the participants have been assigned pseudonyms.

Table 3.1 Profile of the LP group students

<b>Names</b>	<b>Educational background</b>	<b>Prior French instruction and general exposure</b>	<b>Out of class exposure to French</b>
Peter (M)	B. A. in criminology	Basic French 1 to 2 hours/week in grades 4 to 8 and 4 hours/week government language training for 3 - 4 months in approx. 2000  Lived chiefly in English in non-francophone contexts	Listened to early morning news bulletin on French-language radio and occasionally watched French language television evening news + occasionally tried to converse with francophone neighbour
John (M)	Master's degree in business	Rudimentary French in grades 3 and 4  Lived chiefly in English in non-francophone contexts	Listened principally to early morning news bulletin on French-language radio and occasionally watched French language television evening news
Paula (F)	Technical college degree	Basic French courses throughout schooling  Lived chiefly in English in bilingual contexts and with native francophone relatives  Had already obtained same required level ten years prior, but was assessed to have lost this required level upon recent testing	Listened principally to early morning news bulletin on French-language radio and occasionally watched French language television evening news
Julie (F)	2 college degrees in social sciences & business and administration	Basic French courses throughout high-school and college  Lived chiefly in English in bilingual or largely francophone contexts and with native francophone relatives	Listened to early morning news bulletin on French-language radio, occasionally watched French language television evening news + resided in largely francophone community where French is extensively heard
Emma (F)	Interior design and construction college degree	Basic French throughout high-school and 2 college-level courses  Lived chiefly in English in bilingual contexts	Listened principally to early morning news bulletin on French-language radio and occasionally watched French language television evening news

Table 3.2 Profile of the HP group students

Names	Educational background	Prior French instruction and general exposure	Out of class exposure to French
Nick (M)	BA in political science and LLB (university law degree)	Basic French in grade 13  Lived chiefly in English in non-francophone contexts, then more recently in bilingual context.	Read French-language newspaper daily + listened to evening news on French-language television
Ann (F)	BA in Social and cultural studies, courses in archeology and history of art, Master's in museum studies	Basic French throughout schooling  Lived chiefly in English in non-francophone contexts, then only extremely recently in bilingual context.	Read extensively in French + sought frequent opportunities for one-on-one interactions with instructors (which was an integral part of the language training)
Helen (F)	BA in legal studies and sociology  Master's in human studies	Mainly conversational French courses in Grades 10, 11, and 12 + 1 first year university-level conversational French course + 1 first year university-level linguistics course  Multilingual parent fostered early interest for languages  Born and raised in largely francophone community attending English language schools up to age 10, then lived for several years in entirely non-francophone contexts, more recently living in bilingual context.	Read extensively in French

None of the participating students reported any learning disability to the participating institution or to the researcher. It should be noted that, at the time of this study, the institution's policy in this regard was that, if a student's placement tests suggested that this learner may suffer from, for example, a phonological discrimination handicap, the learner was to be informed that language learning may present particular difficulties; however, unless the learner concerned reported or acknowledged his/her potential learning difficulties *at his/her own initiative*, the institution had only the power to place this student in a level D group, rather than in a special group where s/he could receive individual remedial attention.

### 3.2.2 Self-regulatory approach to listening comprehension development examined in this study

A *self-regulatory approach* to L2 listening development fosters the active engagement of the learner with the aural language and the listening comprehension process, and it promotes independent and critical thinking in L2 listening and learning. The self-regulatory approach to L2 listening comprehension investigated in this study was adapted from Vandergrift (2003b).

More specifically, for the purposes of this study, a *self-regulatory approach* to L2 listening comprehension development is understood as a pedagogical approach aimed at facilitating students' acquisition of listening skills by gradually guiding them toward confidently and competently taking control of their own listening skills development by providing them with regular opportunities and adequate time to (1) identify and reflect (a) upon the nature and sources of the particular difficulties which they experience while listening to the target language (to develop their *person* metacognitive knowledge), (b) upon the complexities of the cognitive processes involved in listening comprehension, and the requirements for listening comprehension success in their target language (to develop their *task* and *strategic* metacognitive knowledge), and (c) upon means through which their particular listening difficulties could be dealt with realistically (to further develop their *person*, *task* and *strategic* metacognitive knowledge), in order that the learners may (2) take an active part in overcoming some of their listening difficulties (adapted from Goh, 2000 and 2002a,b).

To this aim, a French aural text was the focus of listening practice, for periods of

approximately 45 to 60 minutes, twice a week. Based on their assessments of the level of comprehension reached by the various students in the listening exercises, the instructors and the researcher in turn selected a variety of French aural texts at or slightly above the students' proficiency level, in a variety of accents, and suited to the students' general or professional interests. These texts included monologues and interactions on a variety of subjects pertaining principally to major national or international issues. Some texts were initially written documents which the instructors or the researcher adapted, while others were selected from among commercially available recordings. The texts varied in length from 3 to 5 minutes. All texts were played on standard language classroom sound reproduction equipment.

The students approached the text cold; that is to say: prior to listening, no information was provided concerning the context of the excerpt. The researcher's rationale for this decision was three-fold: (1) A *self-regulatory* approach to listening comprehension development should, as its name implies, guide learners towards succeeding *autonomously* in listening comprehension; (2) in authentic day-to-day listening situations such as those the students would experience when they returned to their respective occupations, very rarely would the context be made available to them before-hand. Providing the students with the contexts in the class exercises would not only give them an unnatural advantage, but it could make it more difficult to assess the extent to which they had derived comprehension on their own, whereas the researcher felt that offering no clues whatsoever to the context before the students engaged into the listening task could (3) accelerate and maximize the learners' development of self-regulatory abilities, the refinement of their metacognitive awareness, and their development of effective comprehension strategies. In this study, prior to listening,

rather than being provided with clues concerning the context of each listening exercise, the students were thus encouraged to briefly reflect upon how – in light of the earlier listening exercise(s) – the upcoming listening task might best be approached, including which self-control and strategic skills might be required for successful comprehension.

The aural text was then played – uninterrupted – a first time. After this first listen, the students were encouraged to briefly and informally note in writing in a listening note-book (see Appendix B) what they understood, what this understanding was based on, and how they planned to approach the text in the second listen.

The text was then played – uninterrupted – a second time, and students were again encouraged to briefly and informally jot down their understanding of the text, what this understanding was founded upon, why this understanding may or may not have changed from their earlier understanding, and how they planned to approach the text in the third listen. The students then discussed, in French, with a partner, the difficulties they encountered in their understanding of the text, how they attempted to resolve these difficulties, and how they had reached their particular understanding of the text. They then further noted in writing how, in light of their exchange with a partner, their understanding may or may not have changed, and how they planned to approach the third and final listen.

After a third – uninterrupted – listen to the text, the students all shared, in French, in a class-wide discussion, their understanding of the text, and the problems they had encountered in the comprehension of this text, focusing on how they had attempted to make sense of the text in spite of these obstacles, and how they perceived the different approaches which they had

adopted to have facilitated or hampered their comprehension. They were then encouraged to note down how, in light of this experience and of their reflections, they planned to approach the next listening exercise. Examples of specific goal-setting targeted by the researcher in this approach included: to remember to focus attentively throughout the listen, to remember to not focus excessively on individual segments, to resist the temptation to translate literally while listening, to not get discouraged if parts of a text proved difficult to understand, to remember to systematically question and double-check any unfamiliar expression which had been guessed, and to draw from a variety of sources of knowledge for comprehension.

Following the three listens, each student was given a copy of the transcription of the aural text to read in silence. Then, either (a) the recording was played again while the students attentively followed along with the transcription, or (b) the instructor read the transcription aloud, emphasizing, in passing, the correct pronunciation of segments which students had reported as problematic, stressing liaisons not yet automatized in all students' speech, or (c) the students each took turns reading aloud a passage of the transcription. In the latter case, the instructors' interventions were strictly limited to rectifying incorrect or ambiguous pronunciation and non-observance of obligatory liaisons.

The instructor and students then systematically reviewed and critically discussed, in French, the transcription of the aural text, from the points of view of vocabulary, grammar, usage, spelling, and pronunciation. In this review, the instructors paid particular attention to the specific comprehension difficulties reported by the students in the listening exercise.

Approximately every other exercise, as time permitted, the instructor engaged the students in

a brief final discussion, in French, on the topic of the aural text. These discussions were intended to enable the students to immediately practice reusing the new vocabulary items heard, the correct pronunciation of new expressions learnt, or of obligatory liaisons stressed by the instructor. These discussions were also intended to add a dynamic, diverse, and motivating dimension to the listening exercises.

No aspect of the listening exercises whatsoever was subject to formal academic performance assessment or evaluation.

In the case of the very first listening exercise, at the instructors' request, the researcher demonstrated the experimental method. All subsequent exercises were conducted by the instructors, with no intervention whatsoever from the researcher.

### **3.2.3 Data collection**

Figure 3.1 summarizes the listening exercises schedule, the research instruments used, and the schedule for the data collection over the twelve weeks of the study.

Figure 3.1 Summary of listening exercises schedule, research instruments, and data collection schedule

<p><b>Weeks 1 to 3</b></p>	<p><b>Week 1</b></p> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted an informational and organizational meeting with the participating instructors</li> <li>• outlined the study to all students in each participating class</li> <li>• recorded her first observations in a field note-book</li> </ul>	<p><b>Week 2</b></p> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted individual interviews with the students</li> <li>• conducted individual questionnaire administrations with the students, followed immediately by a stimulated recall session</li> <li>• conducted concurrent think-alouds with the students</li> <li>• recorded her observations</li> </ul>	<p><b>Week 3</b></p> <p><b>The instructors</b></p> <ul style="list-style-type: none"> <li>• conducted listening exercises twice</li> </ul> <p><b>The students</b></p> <ul style="list-style-type: none"> <li>• recorded their comprehension in a personal listening note-book twice</li> </ul> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted observation once in each group</li> <li>• recorded her observations</li> </ul>
<p><b>Weeks 4 to 6</b></p>	<p><b>Week 4</b></p> <p><b>The instructors</b></p> <ul style="list-style-type: none"> <li>• conducted listening exercises twice</li> </ul> <p><b>The students</b></p> <ul style="list-style-type: none"> <li>• recorded their comprehension in their note-books twice</li> </ul> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted observation once in each group</li> <li>• recorded her observations</li> </ul>	<p><b>Week 5</b></p> <p><b>The instructors</b></p> <ul style="list-style-type: none"> <li>• conducted listening exercises twice</li> </ul> <p><b>The students</b></p> <ul style="list-style-type: none"> <li>• recorded their comprehension in their note-books twice</li> </ul> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted observation once in each group</li> <li>• recorded her observations</li> </ul>	<p><b>Week 6</b></p> <p><b>The instructors</b></p> <ul style="list-style-type: none"> <li>• conducted listening exercises twice</li> </ul> <p><b>The students</b></p> <ul style="list-style-type: none"> <li>• recorded their comprehension in their note-books twice</li> </ul> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted observation once in each group</li> <li>• recorded her observations</li> </ul>

<p><b>Weeks 7 to 9</b></p>	<p><b>Week 7</b></p> <p><b>The instructors</b></p> <ul style="list-style-type: none"> <li>• conducted listening exercises twice</li> </ul> <p><b>The students</b></p> <ul style="list-style-type: none"> <li>• recorded their comprehension in their note-books twice</li> </ul> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted individual questionnaire administrations with the students, followed immediately by a stimulated recall session</li> <li>• conducted observation once in each group</li> <li>• recorded her observations</li> </ul>	<p><b>Week 8</b></p> <p><b>The instructors</b></p> <ul style="list-style-type: none"> <li>• conducted listening exercises twice</li> </ul> <p><b>The students</b></p> <ul style="list-style-type: none"> <li>• recorded their comprehension in their note-books twice</li> </ul> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted observation once in each group</li> <li>• recorded her observations</li> </ul>	<p><b>Week 9</b></p> <p><b>The instructors</b></p> <ul style="list-style-type: none"> <li>• conducted listening exercises twice</li> </ul> <p><b>The students</b></p> <ul style="list-style-type: none"> <li>• recorded their comprehension in their note-books twice</li> </ul> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted observation once in each group</li> <li>• recorded her observations</li> </ul>
<p><b>Weeks 10 - 12</b></p>	<p><b>Week 10</b></p> <p><b>The instructors</b></p> <ul style="list-style-type: none"> <li>• conducted listening exercises twice</li> </ul> <p><b>The students</b></p> <ul style="list-style-type: none"> <li>• recorded their comprehension in their note-books twice</li> </ul> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted observation once in each group</li> <li>• recorded her observations</li> </ul>	<p><b>Week 11</b></p> <p><b>The instructors</b></p> <ul style="list-style-type: none"> <li>• conducted listening exercises twice</li> </ul> <p><b>The students</b></p> <ul style="list-style-type: none"> <li>• recorded their comprehension in their note-books twice</li> </ul> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted observation once in each group</li> <li>• recorded her observations</li> </ul>	<p><b>Week 12</b></p> <p><b>The researcher</b></p> <ul style="list-style-type: none"> <li>• conducted concurrent think-alouds with the students</li> <li>• conducted individual questionnaire administrations with the students, followed immediately by a stimulated recall and a semi-structured interview</li> <li>• recorded observations</li> </ul> <p><b>The students and instructors</b></p> <ul style="list-style-type: none"> <li>• completed end-of-study individual summative reports on the listening method</li> </ul>

The following section presents a summary of the respective merits and shortcomings of each of the data elicitation methods summarized in Figure 3.1, accompanied by a description of the particular use which was made of each method, in this study, to attempt to capitalize on the various methods' merits while at the same time compensating for their shortcomings.

### **3.2.3.1. Questionnaires**

#### **3.2.3.1.1 Characteristics of questionnaires**

Broadly speaking, questionnaires can yield three types of L2 data: (1) factual (e.g., length of exposure to the language under study), (2) behavioral (e.g., history of strategy use), and (3) attitudinal (e.g., learner beliefs and interest) (Brown, 2001; Brown & Rodgers, 2002). One of the principal advantages of questionnaires is that they are uniquely capable of quickly providing a large amount of information on a wide range of L2 factors (Dörnyei, 2003).

Nevertheless, questionnaires are not suited to probing deeply into an issue (Alderson, 1992; Block, 1998; De Groot, 2002; Dörnyei, 2001, 2003). Moreover, the reliability of questionnaire responses can vary greatly from one individual to another, depending on (a) the time and care assigned to the completion of the questionnaire, (b) the extent of misinterpreting or misreading of the items (Alderson, 1992; Allan, 1995; Block, 1998; Dörnyei, 2003; Winne, Jamieson-Noel & Muir, 2002), (c) the extent of intentional and unintentional deviations from the truth (Alderson, 1992; Block, 1998; Brophy, 2005; Dörnyei, 2003; Oppenheim, 1992; Winne et al., 2002), and (d) the extent of instrument effect

on respondents' behavior or memory (Alderson, 1992; Allan, 1995; Winne et al., 2002).

A number of L2 researchers (Alderson, 1992; Brown, 2001; Dörnyei, 2003; Gass & Mackey, 2000; Gillham, 2000; Lazaraton, 2000) have argued that questionnaires work well in combination with follow-up retrospective research in which participants are asked to review their responses and to provide retrospective comments on the reason for their particular answer in each item, this coverage of all of the items ensuring systematicity and comprehensiveness. It is more and more widely argued that such a two-phase quantitative-qualitative design brings out the best of both approaches while mitigating the shortcomings and biases inherent in each paradigm (Dörnyei, 2003; Perry, 2002).

#### **3.2.3.1.2 Use of questionnaires in this study**

In order to investigate the first research question, the comprehensive 51 item version of a metacognitive awareness listening questionnaire (MALQ – Vandergrift, Goh and Mareschal, 2005 – see Appendix C) was administered at the beginning, middle, and end of this study.

This recently developed inventory comprises not only items tapping L2 listening comprehension strategy use, but also provides for an assessment of learners' self-regulation, motivation, and linguistic confidence. The comprehensiveness of this questionnaire therefore allows for the investigation of several of the factors of interest in this study. This instrument was developed following an in-depth review of the recent literature on metacognition, listening comprehension, and self-regulation, and a careful examination of existing instruments designed to assess comprehension processes in both listening and reading. The

format of this questionnaire was designed following the guidelines outlined by Brown (2001), Dörnyei (2003), and Gilham (2000). The instrument has been subjected to several rounds of validation. The MALQ was most recently validated with a sample of 966 respondents at different levels of proficiency in various countries. These most recent analyses suggest that this instrument possesses strong psychometric properties (for a detailed description of the MALQ validation process, see Vandergrift et al., 2006).

The purpose of the three administrations of this questionnaire (each requiring approximately 15 minutes) was to provide a quantity and variety of data concerning the language learners' perceived (a) metacognitive awareness, (b) self-regulatory abilities, and (c) listening comprehension strategy use. In particular, the purpose of the questionnaire administrations was (1) to document the reported metacognitive awareness, self-regulatory abilities, and listening comprehension strategy use, over the course of the study, of (a) the students assessed by the institution as high-achievers, and (b) the students assessed as low-achievers, in order (2) to document any apparent central tendencies, variations, or differences in the metacognitive awareness, self-regulatory abilities, and listening comprehension strategy use reported by the students in the two different groups.

In order to probe more deeply into the issues investigated, in particular, to shed light on the *reasons* for the students' responses, and on the *credibility* of their answers, the questionnaire administrations were followed immediately by a stimulated recall session, as recommended in the L2 methodology literature (Alderson, 1992; Brown, 2001; Dörnyei, 2003; Gass & Mackey, 2000; Gillham, 2000; Lazaraton, 2000).

### 3.2.3.2 Stimulated recall

#### 3.2.3.2.1 Characteristics of stimulated recall

The theoretical foundation for stimulated recall relies on an information-processing approach whereby the use of and access to memory structures is enhanced by a prompt that aids in the recall of information (Gass & Mackey, 2000). In L2 research, stimulated recall methodology has been used more specifically to explore learners' thought processes and strategies at the time of an activity or task. This is achieved by asking learners to report those thoughts after they have completed a task or activity. Stimulated recall is conducted with some degree of *support* for the recall, such as the learners' L2 written product or questionnaire responses.

Stimulated recall can be useful for at least three purposes. First, it can help isolate particular events from the stream of consciousness. In so doing, it can help to identify the type of knowledge a learner uses when trying to solve particular problems, when making linguistic choices or judgments, or when generally involved in comprehension or production. Second, stimulated recall can also help to determine whether this knowledge is organized in specific ways. Third, stimulated recall can be used to determine when and if particular cognitive processes, such as search, retrieval, and decision-making are being employed. A related advantage of the stimulated recall methodology is that it allows researchers to observe how individuals may be similar or different in their approach to problems. In certain cases, it is only through stimulated recall that differences in process can manifest themselves.

Stimulated recall has also been utilized to document L2 learners' attitudes, beliefs, and perceptions, on learning for instance. In addition, stimulated recall methodology has

frequently been used profitably in conjunction with other methodologies, as a means of triangulation or further exploration (Gass & Mackey, 2000; Mackey & Gass, 2005).

It is important to keep in mind that humans nevertheless are essentially sense-making beings, and that they consequently tend to create explanations, irrespective of whether such explanations can be justified (Dennett, 1987; Ericsson & Simon, 1996; Gazzaniga, 1998).

This tendency may be accentuated by the fact that, as documented by a number of researchers (e.g., Cohen, 1996, 1998; Matsumoto, 1993), a great number of L2 cognitive processes are highly complex, not ordinarily performed within consciousness, that some processes are likely not accessible at all for reporting, and that individuals vary considerably in their ability to provide detailed and accurate verbal reports. A second issue requiring consideration is related to the type of memory structure used in recalls. With self-report and self-observational data, accuracy has been documented to decline as a function of the intervening time between the event and the recall (Ericsson & Simon, 1996; Gass & Mackey, 2000). It has also been documented that, if the cognitive information to be recalled is not related to a concrete action, there is generally less specificity in the report. Another issue which deserves consideration is that the precise effects of training participants prior to the stimulated recall process have not been systematically documented for L2 research. A number of researchers have argued that the mere fact of practice may alter thought processes and memory; patterns of behavior and preconceptions could be established, making it unclear what participants were accessing (Gass & Mackey, 2000, Mackey & Gass, 2005).

### 3.2.3.2.2 Use of stimulated recall in this study

In answer to the first research question, in particular, to verify, explain, and complement the numerical questionnaire data in order to increase its credibility and dependability, stimulated recall sessions (approx. 30 minutes) were conducted immediately following each questionnaire administration. All stimulated recall sessions were audio-recorded. The purpose of the stimulated recall was to enable the participants (1) to review the questionnaire items and their corresponding responses to the various statements, (2) to clarify their interpretation of particular questionnaire items if necessary, and in particular, (3) to provide retrospective comments on the reason for their particular answers.

The participants' own item responses were used as prompts for this open-ended reflection. In the case of the stimulated recall which followed the first questionnaire administration, only the students' answers to items 40 to 51 (i.e. exclusively *non-strategy* items related to motivation, confidence, etc.) were reviewed. No strategy-related item was discussed, in order to reduce the risk that a strategy use reflection could influence the students' performance in the think-aloud session which was conducted later the same week.

In the stimulated recall sessions which followed their second and third completion of the questionnaire, the participants were free to elaborate on any of the 51 items. They were also provided with their previously completed copy/ies of the questionnaire, to follow along for comparison purposes. Variations in responses, as well as consistent levels of agreement in answers, over the course of the study, were used as prompts for further exploration into factors such as the participants' metacognition, motivation, and listening strategy use.

To expand upon the foregoing paragraph: In the stimulated recall sessions which followed the second administration of the questionnaire for example, after each participant had completed the questionnaire (for thus the second time in the study), the researcher then placed the copy of the questionnaire which this participant had completed at the very beginning of the study alongside the student's second set of numerical answers, and together, the researcher and participant compared these side-by-side numerical answers from the beginning-of-study and mid-study data collections. The researcher first invited the participants to comment on any items of interest to them. Typically, the students commented on those items for which they had provided widely differing numerical answers in one questionnaire administration compared to the other. The researcher's requests for clarifications and explanations focused similarly on (a) increases or decreases in numerical answers amounting to more than one point, but also, on (b) consistently greatest or least degrees of agreement with the questionnaire statements, and on (c) numerical assessments which appeared counter-intuitive to the researcher based on her knowledge of L2 listening comprehension and language learning, or on her classroom observation of the student's listening comprehension. For example: if classroom observation had suggested that a particular high-proficiency student had likely reached a high level of automatization in listening comprehension, but this particular student's numerical questionnaire answers indicated a high use of literal translation, or an increase in the use of literal translation (assessments which are counter-intuitive based on L2 listening research findings), the researcher asked this respondent to elaborate on the reasons why s/he perceived that s/he made extensive use of literal translation, and to recall precise examples if possible.

Given the fact that the learners in this study were in what are defined as “highly structured situations of stimulated recall with clear and strong prompts” (Gass & Mackey, 2000) – the prompts being, in this case, their numerical questionnaire answers – the researcher did not provide the participants with any training prior to the stimulated recall sessions, in order to lessen the risk of influencing their reports.

In sum, multiple questionnaire administrations followed immediately by stimulated recall sessions were used in order to provide a variety of detailed, comparative data concerning the learners’ *perceived* metacognitive awareness, self-regulatory abilities, and listening strategy use. This data could be particularly useful to support data elicited through other methods such as the researcher’s classroom observation or the students’ listening comprehension notes.

In addition, to provide detailed insights into the learners’ metacognitive awareness, self-regulatory abilities and strategy use *in actual listening situations*, the questionnaire data were complemented by think-alouds.

### **3.2.3.3 Think-alouds**

#### **3.2.3.3.1 Characteristics of think-alouds**

Think-alouds have been widely used in L2 research – including in listening comprehension research – to explore the strategies learners use, and the potential effects of strategy use (Brown & Rodgers, 2002; Chamot, 1999; O’Malley & Chamot, 1990). Qualitative analyses

of think-alouds have provided invaluable insights into L2 listeners' processing. Think-alouds have also been used quantitatively, in addition to behavioral data, in order to strengthen empirical studies' support for a hypothesis or theory, given that they can provide converging evidence not otherwise available. In addition, think-alouds have recently been used profitably to investigate the roles of attention and awareness in language processing and acquisition (Bowles & Leow, 2005; Leow & Morgan-Short, 2004).

One established weakness of think-alouds, nevertheless, is that respondents' verbalizations are typically incomplete. This is due to the difficulty of conducting a task in an unfamiliar language while concurrently reporting one's thought processes, as well as to innate human limitations (Anderson, 1983; Ericsson & Simon, 1987; McLaughlin et al., 1983). A second established drawback of think-alouds is that respondents' reports typically vary greatly in their level of precision and detail (Bowles & Leow, 2005). These variations can be the result of a number of factors, including the characteristics of the linguistic task, the concentration required by the task, the difficulty presented by the verbalization of the cognitive processing investigated, the characteristics of the researcher's prompts, the respondents' verbal and analytical skills, their level of strategic automatization, and other individual learner differences (Bowles & Leow, 2005; Cohen, 1987; Ericsson, 2002; Russo, Johnson & Stephens, 1989; Winne et al., 2002).

#### **3.2.3.3.2 Use of think-alouds in this study**

In answer to the first and second research questions – in particular, to probe more deeply and more directly into the students' listening comprehension and strategy use – concurrent think-

alouds were conducted at the very beginning of the research (prior to the introduction of the experimental method), and at the end of the study. These individual think-aloud sessions (approx. 30 minutes) required the participants to describe their thought processes as they listened to an aural text of 2 to 3 minutes. The texts utilized in the think-alouds, assessed to be slightly above the groups' proficiency level, were collaboratively selected by the instructors and the researcher (see Appendix D).

Students heard each text twice. During the first listen, the researcher stopped the tape at regular intervals – corresponding to natural boundaries – so that the students could report their thought processes. Great care was exercised so that these pauses were sufficiently long to allow the students to report their thought processes, but not so lengthy or numerous as to disrupt their comprehension, memory, or concentration on the listening task. In order to lessen the risks that the researcher's interventions could influence the students' reporting, only non-cueing prompts were used, such as: "What are you thinking now?", or "How did you come to this understanding?", and only when necessary. During the second listen, the entire text was played again, and this time, participants were free to interrupt the tape whenever they wished to add to their earlier report. All think-aloud sessions were audio-recorded. Two tape-recorders were used. One played the tape of the listening task, while the other simultaneously recorded the student's report, researcher's prompts, and the listening task excerpts. All students elected to report in their native language (English), although they occasionally reasoned aloud or expressed thoughts in French also.

The scheduling of the think-alouds – at the very beginning and very end of the study – was intended to allow the researcher (1) at the beginning of the study, to document potential

individual differences, particularly in metacognitive awareness, self-regulatory abilities, strategy use, and overall listening comprehension success, between the students assessed by the institution as high-achievers and those assessed as low-achievers, and (2) to document and compare any potential evolution in the participants' metacognitive awareness, self-regulatory abilities, strategy use, and overall listening comprehension success, in the two different groups, over the course of the experimental study.

In order to lessen the risk of influencing their reporting, no training was provided to the learners prior to the think-alouds. Nevertheless, the researcher emphasized that (a) as much as possible, the listening task was to be the main focus of the students' attention at all times, and that (b) they were only expected to spontaneously verbalize the *thought processes* that were going on in their mind as they were listening to the text, as opposed to any elaborate analysis or explanation for their understanding (as recommended by Cohen, 2000, Ericsson & Simon, 1987, and Gass & Mackey, 2000).

In sum, the three administrations of the 51 item questionnaire accompanied by stimulated recall sessions, and the two think-aloud sessions could be expected to yield a wide variety of complementary and contrastive data concerning the learners' metacognitive awareness, self-regulatory abilities, strategy use, and aural comprehension *as perceived* by the students, and *in situations* of L2 listening.

In addition, semi-structured interviews were conducted at the beginning and at the end of the study.

### 3.2.3.4 Semi-structured interviews

#### 3.2.3.4.1 Characteristics of semi-structured interviews

A *semi-structured interview* includes a set of prepared guiding questions and prompts, but its format is open-ended, and the interviewee is encouraged to elaborate on the issues raised in an exploratory manner. Semi-structured interviews are extensively used in L2 research, including in listening studies. One of the principal advantages of this type of interview is that its open-ended and exploratory nature allows for the emergence of new dimensions which may not originally have been anticipated by the researcher, and which may be crucial for gaining an understanding of the interviewee, and of the phenomena under study. Second, the semi-structured interview methodology can enable a researcher to explore the various facets of a participant's experience in depth. Third, semi-structured interviews seek to promote respondents' free expression, using their own categories and formulation, in contrast to the considerably higher degree of pre-determination inherent in questionnaires or structured interviews. Similarly, semi-structured interviews can allow respondents to establish the links which *they* judge useful or pertinent among the various elements discussed (Alcalay, 2002; Brown, 2001; De Groot, 2002; Dörnyei, 2001; Ushioda, 2000; Vermersh, 1994).

Researchers cannot, however, eliminate all risks of pre-structuration in respondents' reports. Neither experience nor rigour can guarantee that the prompts and the respondents' answers will not be influenced by the researcher's own preoccupations and presuppositions. It is thus strongly recommended that, in the conduct of their research and in their analysis of the interview data, researchers take into consideration the manner in which respondents' reports

could have been influenced by the context, by the prompts used to elicit the data, by the interviewee-interviewer relationship, and by the wider institutional research context (Davis, 1995; Gubrium & Holstein, 2002; Mills, 2001; Poupart, 1997).

#### **3.2.3.4.2 Use of semi-structured interviews in this study**

Individual semi-structured interviews (approx. 20 minutes) were conducted at the beginning and end of this study.

At the beginning of the study, the goal of the semi-structured interview was (1) to establish a relationship conducive to the participants' sustained collaboration, (2) to provide them with any further information they may have required concerning the purpose and organization of this research project, and the precise requirements of participation in the study, (3) to gather general information concerning the participants, such as their educational background and prior study of French (as previously illustrated in Tables 3.1 and 3.2), and (4) to gain preliminary insights into these language learners' metacognitive awareness, self-regulatory abilities, and any additional factor that they or the researcher may have identified as relevant to their language learning experience (see guiding questions for this particular interview in Appendix E).

At the end of the study, the purpose of a second semi-structured interview was to enable the participants to express their thoughts and suggestions concerning the overall effectiveness of the listening method investigated in this study (see the guiding question for that particular interview in Appendix F). All semi-structured interviews were audio-recorded.

The themes raised by the students in the final interview, together with the researcher's observation field notes, were utilized to guide the design of a comprehensive summative report on the experimental teaching method, which the learners completed at the very end of the study.

All questionnaire administrations, stimulated recalls, think-alouds, and interviews previously described were conducted in the privacy and relative silence of an on-site personal office made available to the researcher by the participating institution for the duration of the study. The students elected to report chiefly in English, with some use of French, principally to illustrate examples cited. All data collection was conducted by the researcher, who has a near-native command of English and a native command of French.

In sum, the combined questionnaire administrations, stimulated recalls, think-alouds, and semi-structured interviews – cyclically conducted – could be expected to efficiently compensate for the shortcomings particular to each instrument while capitalizing on the strengths of each methodology, and these combined instruments could be expected to provide a wide variety of complementary contrastive data concerning the factors of interest in this study: the learners' metacognitive awareness, self-regulatory abilities, listening strategy use, and overall listening comprehension abilities.

Nonetheless, the principal focus of this study was to investigate the effectiveness of an experimental pedagogical approach in fostering the refinement of language students' listening skills, and in facilitating and improving their overall listening comprehension.

Moreover, in order that the students could feel free from academic performance pressures, the listening exercises were not subject to any formal evaluation or assessment.

Consequently, in order to document the effectiveness of the experimental listening approach with detail and rigor, it was necessary that the methodology also include instruments which could allow one to examine the students' listening skills and comprehension, not merely at two or three isolated points in time over the course of the study, but all along the course of the study. In other words, the methodological design had to provide for a *continuous record* which would allow one to follow and compare the students' listening strategy use, metacognitive awareness, self-regulatory abilities, and their overall listening success: in action, step by step, in detail, over the entire course of the study. Therefore, listening note-books, in which the participants documented the steps in their listening at every exercise throughout the research, were also used in this study.

### **3.2.3.5 Learner listening note-books – informal learner diaries**

The listening note-books which were completed by the students in this study could be characterized as informal, unstructured learner diaries.

#### **3.2.3.5.1 Characteristics of learner diaries**

Bailey (1990) defined a diary study as “a first person account of a language learning or teaching experience, documented through regular candid entries in a personal journal and then analyzed for recurrent patterns and salient events”. Language learning diaries have been used profitably in a number of L2 studies, including in listening comprehension research.

One of the principal advantages of learner diaries is that they enable students to record various facets of their learning relatively unconstrained. Even in studies in which researchers provide a guideline for the content, the researchers are still able to access the phenomena under investigation from a viewpoint other than their own. Diaries of classroom contexts have produced useful data on a range of aspects of the L2 learning process. These include: individual learners' insights into their own learning processes, their self- and other comparisons, decision-making processes, the process of development over time, attitudes toward classroom learning and instruction, the use of strategies, and the recognition and use of feedback (Bailey, 1990; Mackey & Gass, 2005).

#### **3.2.3.5.2 Use of learner listening note-books in this study**

At each listening exercise throughout this study, the participants were encouraged to briefly record the steps in their listening comprehension processing, the goals they may have set, and their reflections upon the listening comprehension process, in a personal listening note-book provided by the researcher (see Appendix B). Although students were encouraged to use their listening note-book and allotted the time necessary to do so, this note-taking was entirely voluntary, personal, unstructured, and informal, so as to limit the risk that this written reporting could interfere with the students' listening. The purpose of the listening note-books was two-fold. First, it was to make available to the learners a "visual support" to their listening and memory during the aural exercises, and a written record of their listening, in the event that this record could assist their listening comprehension development. Second, the purpose of these listening note-books was to provide a continuous record of additional data concerning the participants' metacognitive awareness, self-regulatory abilities, listening

comprehension strategy use, and overall listening comprehension success. All participants (and the L3 HP students) regularly wrote in their listening note-books – albeit to a varying extent – and all voluntarily made these note-books available to the researcher at the end of the study.

In sum, from the methodological point of view, the use of listening note-books could be expected to provide a detailed and continuous sequence of complementary data concerning (1) potential individual differences between the students assessed by the institution as high-achievers and those assessed as low-achievers, (2) potential central tendencies, variations, and evolution in the participants' metacognitive awareness, self-regulatory abilities, and listening comprehension strategy use over the course of the study, and also, (3) students' perceptions concerning the usefulness and drawbacks of the use of listening note-books within the context of a self-regulatory approach to L2 listening comprehension development.

Nevertheless, it was reasonable to expect that the students' brief and informal note-taking – conducted concurrently with the listening comprehension tasks – could result in textual material in which it could be difficult to find data patterns. This listening note-book data could prove all the more difficult to understand, explain, or interpret if the researcher were removed from the *actual situation* in which the listening experience documented in the note-books occurred. In addition, neither questionnaires, nor stimulated recalls, interviews, think-alouds, or listening note-books could provide the *direct insights* necessary to describe the listening sessions in detail. Therefore, the researcher also conducted weekly observation in each participating group.

### **3.2.3.6 Observation**

#### **3.2.3.6.1 Characteristics of observation**

Observation involves researchers immersing themselves in a research setting, and systematically observing dimensions of that setting, interactions, actions, events, and so on within in (Mason, 1996). Observation can enable a researcher to describe a research context, the constituents of a given situation, and the interactions among various constituents with precision and detail (Brown & Rodgers, 2002; Jaccoud & Mayer, 1997). In a recent investigation of self-regulation within a science learning context for example, Patrick and Middleton (2002) found observation useful because, as similarly remarked by Winne and Perry (2000), (1) it enabled them to portray learners' actions, rather than their recollections or beliefs; (2) it allowed them to document how patterns of student engagement unfolded over time, and (3) it was sensitive to the environment in which the events occurred. Perry, Vandekamp, Mercer & Nordby (2002) also used observation profitably to investigate instructors' support of learners' metacognition, intrinsic motivation and strategic action during reading and writing activities. Nevertheless, as acknowledged by most L2 researchers, observational methods remain limited principally to examination of behaviors, and generally provide limited insights into how individuals make sense of events.

#### **3.2.3.6.2 Use of observation in this study**

The method of observation has been documented to provide extremely limited access to L2 listeners' typically *covert* cognitive processing (O'Malley & Chamot, 1990). However, given

the fact that, in the present study, (a) there were no more than six students in either participating class, and (b) the particular listening method examined involved what could be regarded as extensive linguistic and metalinguistic think-*aloud* reflections, in dyads and class-wide, the researcher judged that observation could provide valuable data, in particular, to complement the data from the students' questionnaire responses, think-alouds, listening notes, and to describe the research context in detail.

Observation was therefore conducted once a week in each group, for one of the two weekly listening exercises. The purpose of the observation was, in particular: (1) to ascertain adherence by the instructors, in both classes, to the experimental listening comprehension approach, (2) to assess the level of ease or difficulty with which individual students were able to adapt to the experimental method, (3) to identify any factors which might have warranted modifications to the methodology or experimental approach, (4) to identify any additional factors which may have exerted an influence on the results of this study, and (5) to be able to provide descriptions of, in particular, (a) the respective classroom environments in the two groups, (b) student to student interactions, (c) instructor - student interactions, and (d) the characteristics of instructors' support and feedback to students in the context of the self-regulatory listening approach.

Throughout the study, in particular during or immediately following each instance of data collection, the researcher noted her observations, self-questioning, and reflections in a field note-book. In the case of the observation sessions, the purpose of these field notes was to provide an immediate, clearly written, and organized record of the phenomena observed.

### **3.2.3.7 Student summative report**

In answer to the third research question – as well as to further complement the data collected pertaining to the first question – a synthesis of (a) the principal themes raised by the students, in the interview conducted the last week of the research, concerning the experimental teaching method examined in this study, complemented with a synthesis of (b) the principal themes emerging from the researcher’s observational field notes, were used to guide the design of a 23 question open-ended summative report on the experimental method (see Appendix G). The purpose of this summative survey was to allow the participants to provide a comprehensive assessment of the listening exercises, as well as to provide further explanatory data to complement the researcher’s observational field notes.

A copy of the 23 question summative survey was made available to each participating student by the researcher, at the end of the study, on her last day at the research site. It was emphasized that completion of this survey was entirely voluntary. The three L3 students in the high-proficiency group asked the researcher if they could also complete a summative report. The researcher thus provided copies of the summative survey to the L3 students also. All L2 participants – and L3 students – made their completed reports available to the researcher within a week.

### **3.2.3.8 Instructor summative report**

At the very end of the study, in order to further verify and complement the answers provided to the first research question by the students’ data and the observational notes, the researcher

also asked the instructors to express their views concerning the self-regulatory approach to L2 listening development investigated in this study (see Appendix H). This 5 question open-ended survey was completed by the participating instructors in both groups.

### 3.2.4 Data analyses procedure

Hence, to ensure credibility, dependability, detail and rigour in the research design for this study, six data collection instruments – questionnaires, stimulated recalls, think-alouds, interviews, listening note-books, and observation – were cyclically used to complement, explain, and verify the various findings elicited by each instrument in the investigation of the first and second research questions.

As outlined in the beginning of this chapter, the interpretative qualitative case study design as conceived and defined by Davis (1995) was adopted for this study. In Davis' research design, there are four fundamental requirements to ensure credibility, dependability and the potential transferability of findings:

- the search for *patterns of generalization* across the *multiple sources of data*,
- *richness of detail* ('particular description') in the description of findings,
- the establishment of the *generalizability of findings* within the study ('general description'),
- analyses of the *meaning of actions* from the *perspective of the actors* in the events ('interpretive commentary') (Erickson, 1986 and Davis, 1995).

In particular, rigour in an interpretative qualitative case study requires that the researcher take into account "all relevant and theoretically salient micro and macro contextual influences that stand in a systematic relationship to the behavior or events one is attempting

to explain” (Watson-Gegeo, 1992, cited in Davis, 1995). Lincoln and Gruba (1985, cited in Davis, 1995) suggested that one way of guarding against researcher bias in the interpretation of data is for the researcher’s mind processes, position, and the bases for decisions about the enquiry to be displayed. Consistent with these recommendations, in Davis’ (1995) research design, the *interpretive commentary* frames the reporting of both particular and general description:

“In presenting the data, the researcher usually first provides a brief commentary on what the sample of data reveals as a sample of the assertion being made. A longer interpretive commentary following the data sample both explains and interprets the specific sample and then frames it in a theoretical discussion that points to the more general significance of the assertion or pattern. The interpretation of general assertions can lead to a discussion of the overall (grounded) theory produced by data collection and analyses”.

This data reporting approach allows readers to become co-analysts of the data and interpretations presented, to critically evaluate the study, and to surmise possible applications of grounded theory to their own research or pedagogical interests (Davis, 1995, p. 448). These are the fundamental approach and recommendations which were adopted for the analyses of the data and the presentation of the results in this study.

It should be noted that, although five students participated in this study in the low-proficiency group, the data set from one of these students (Paula) is not presented here, because in many instances of data collection, this particular learner provided incomplete, or insufficient explanatory data. The analyses presented in this study are therefore based on the data from four low-proficiency L2 students and three high-proficiency L2 learners (as well as three high-proficiency L3 students, in the case of some instruments).

It should be noted also that the comprehensive multi-source, multi-method schedule of cyclical data collection which was followed in this study yielded an abundance of data whose presentation would far exceed the standard space limits stipulated for the presentation of results in a doctoral thesis. The researcher was thus compelled to limit the presentation of results in this thesis to (a) the data from six of the seven instruments which were utilized (omitting the researcher's observation data), and to (b) detailed summaries, in the case of two of the sources of data (namely: the students' listening notes and summative reports).

The next sections describe the procedure followed for the data analyses and presentation of the results.

#### **3.2.4.1 Analysis of the student questionnaire data**

Four main groups of factors have been identified by research as particularly important constituents of metacognition, self-regulation, and effective strategy use: (1) attention and memory, (2) approach to problem-solving, (3) evaluation of comprehension, and (4) affective control, perceptions and beliefs (e.g. Vandergrift et al., 2006; Wenden, 1998, 1999; Winne, 1995, 2001). Therefore, the researcher at the outset organized the most pertinent questionnaire items under these four main categories.

Tables were then drafted illustrating the responses – in each of the three administrations of the questionnaire – of each participant, in each group, for the individual items established by research as most fundamental, within, successively, each of the four main categories. In order to further facilitate comparisons of the various participants' answers, an average of the

score provided by the students across the three administrations of the questionnaire was calculated for each item. An assessment of the tendency in the respondents' answers, based on the numerical increase, stability, or decrease in their answers, was also provided.

Example:

<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>5.3</b>	<b>increase</b>
<b>Ann</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4.6</b>	<b>relative stability</b>
<b>Helen</b>	<b>6</b>	<b>5</b>	<b>6</b>	<b>5.6</b>	<b>relative stability</b>

In the case of each fundamental questionnaire item presented for each of the four main categories, the table illustrating the data is followed by a summary of the results.

These individual summaries of the results are in turn followed, in most instances, by excerpts from the participants' mid- and end-of-study stimulated recalls on the questionnaire. All students' stimulated recall protocols were transcribed verbatim, by the researcher, respecting Kasper's (1998) guidelines, and all transcriptions were verified by a native anglophone.

#### **3.2.4.2 Analysis of the student think-aloud data**

As in the case of the students' stimulated recall protocols on the questionnaire, all students' think-aloud protocols were transcribed verbatim by the researcher following Kasper's (1998) recommendations, and these transcriptions were similarly verified by a native anglophone.

In light of the abundance of data collected in this study, the researcher limited the presentation of the think-aloud data to the reports from the two students in each group who were best able to verbalize their thought processes in detail both in the questionnaire stimulated recall and in the think-aloud sessions. Nevertheless, as recommended by Davis (1995, 1998), Gass and Mackey (2000), and Kasper (1998) – and as in the case of the presentation of the students' stimulated recalls on the questionnaire – the researcher ensured that sufficient excerpts from each student's recall reports were presented to allow readers to follow all analyses and conclusions leading to the interpretation of this data, as well as to allow readers to assess the generalizability of the findings to other learning contexts.

In order to provide further answers to the first and second research questions, the interpretive commentary accompanying the presentation of the students' think-aloud protocols focused on a search for (1) apparent differences, similarities, or general patterns in the students' reported metacognitive awareness, self-regulation, and strategy use, *across* as well as *within* the two groups of L2 listeners, (2) any apparent relation between reported components of metacognitive awareness, self-regulatory abilities, and L2 listening comprehension strategy use *across* as well as *within* the two groups, and (3) any apparent evolution in the learners' reported metacognitive awareness, self-regulation, and L2 listening comprehension strategy use over the course of the study, *across* as well as *within* the two groups of L2 listeners.

#### **3.2.4.3 Analysis of the student summative report data**

All hand-written data from the students' summative reports were transcribed verbatim by a native anglophone following Kasper's (1998) recommendations. The researcher verified

these transcriptions in their entirety.

In order to provide detailed answers to the third research question investigated, as well as to provide complementary answers to the first research question, the researcher drafted an exhaustive summary of the answers provided by the L2 participants and L3 students to each of the 23 open-ended questions included in the summative reports. As in the case of the students' stimulated recalls on the questionnaire, the individual summaries of results are accompanied by numerous excerpts from the learners' explanations for their answers, in order to enable the reader to come to a more independent assessment and interpretation of the students' evaluations of the listening method investigated in this study.

#### **3.2.4.4 Analysis of the student listening note-book data**

As in the case of the analyses of the questionnaire and think-aloud data, the researcher's analysis of the students' listening note-book entries focused on a search for (1) apparent differences, similarities, or general patterns in the students' reported metacognitive awareness, self-regulation, and strategy use, *across* as well as *within* the two groups of L2 listeners, (2) any apparent relation between reported components of metacognitive awareness, self-regulatory abilities, and L2 listening comprehension strategy use *across* as well as *within* the two groups, and (3) any apparent evolution in the learners' reported metacognitive awareness, self-regulation, and L2 listening comprehension strategy use over the course of the study, *across* as well as *within* the two groups of L2 listeners.

In light of the abundance of data collected in this study, and in observance of the standard

length limits for a doctoral thesis, the researcher was compelled to limit the presentation of the students' listening note-book data to a summary of the *strategic approach* to listening comprehension evident from the students' data in each group, by the end of the study, based on the *types* of notes (such as the identification of specific comprehension problems or monitoring goals) which they recorded during or following each of the three listens.

#### **3.2.4.5 Instructor summative evaluation data**

The presentation of the results concludes with a summary of the responses provided by the participating instructors to the 5 question end-of-study survey evaluating the self-regulatory approach to L2 listening comprehension development investigated in this study.

The following chapter presents the data provided, respectively, by the students' questionnaire responses and stimulated recall protocols on the questionnaire, by their think-aloud protocols, end-of-study summative reports, listening note-books, and by their instructors' end-of-study summative reports.

## Chapter IV

### Results

#### 4.0 Introduction

The objectives of this study were to investigate the following questions:

- (1) What are the effects of a self-regulatory approach to listening comprehension development on language learners' (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension?
- (2) Are there interrelationships between language learners' metacognitive awareness, self-regulatory abilities, listening comprehension strategy use, and their overall success in listening comprehension? If so, what are these interrelationships?
- (3) What are language learners' perceptions and attitudes towards a self-regulatory approach to listening comprehension development?

In answer to these questions, sections 4.1 to 4.5 present summaries of the data provided, respectively, by the students' questionnaire responses and stimulated recall protocols on the questionnaire, think-aloud protocols, end-of-study summative reports, listening note-books, and by the instructors' end-of-study summative reports.

#### 4.1 Results from the students' questionnaire data and stimulated recalls on the questionnaire

##### 4.1.0 Introduction

In answer to the first research question, the following sections present the numerical and stimulated recall questionnaire data pertaining to the students' (1) use of attention and

memory, (2) approach to problem-solving, (3) use of evaluation, and (4) affective control, perceptions and beliefs, in L2 listening comprehension.

#### 4.1.1 Students' use of attention and memory in L2 listening comprehension

Tables 4.1 to 4.3 present students' answers to the most fundamental questionnaire items pertaining to attention and memory:

- *I try to get back on track when I lose concentration* (item 13)
- *I focus harder on the text when I have trouble understanding* (item 14)
- *I adjust my level of concentration depending on the speed of the text* (item 15)

Table 4.1 : Students' answers to *I try to get back on track when I lose concentration* (item 13)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	4	5	6	5	<b>increase</b>
<b>John</b>	4	6	6	5.3	<b>increase</b>
<b>Emma</b>	5	5	5	5	<b>stability</b>
<b>Julie</b>	5	5	5	5	<b>stability</b>
<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	4	5	5	4.6	<b>slight increase</b>
<b>Ann</b>	5	4	5	4.6	<b>relative stability</b>
<b>Helen</b>	6	5	6	5.6	<b>relative stability</b>

In both groups, the participants' answers indicate relatively similar, high levels of agreement with the statement in item 13. Overall, in both groups, these results also suggest a relative stability in the efforts deployed in order to regain concentration when necessary, or a slight increase in these efforts.

In the mid-study stimulated recall, Peter (LP group) explained the increase (4-5) in his scores for item 13 in these words:

“... What happens is that, you tend to tune out, right? Like before, I would tune out stuff. Cause there’s so many words in the text that you don’t understand, right?, you know, you’re only picking up a word here and there, so it’s hard you know, to stay, on your concentration, so you start to drift and you go: Oh god! (pronounced in tone of discouragement), but now, of course, I understand more, so it’s more, it’s easier to stay concentrated...”.

Table 4.2 : Students’ answers to *I focus harder on the text when I have trouble understanding* (item 14)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>John</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>stability</b>
<b>Emma</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5.6</b>	<b>relative stability</b>
<b>Julie</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>5.3</b>	<b>increase</b>
<b>Ann</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4.6</b>	<b>relative stability</b>
<b>Helen</b>	<b>6</b>	<b>5</b>	<b>6</b>	<b>5.6</b>	<b>relative stability</b>

As in the case of item 13, the participants’ answers indicate relatively similar, high levels of agreement with the statement in item 14 in both groups. Overall, in both groups, these results also suggest a relative stability in the efforts deployed to increase attention and concentration in the face of listening difficulties.

This is how Helen (HP group) explained her scores (6-5-6) for this item 14:

“I’m generally in the right ball park, but if I’m not, then I will, I’ll rethink what I’m doing and listen more carefully and see if I can pick up the thread. So, usually, you know, everything seems to be following, everything seems to make sense, everything seems to be following one thread, but if it doesn’t, then I have to stop and really, you know, attend a little bit more and maybe put the right focus on some key words...”.

Table 4.3 : Students' answers to *I adjust my level of concentration depending on the speed of the text* (item 15)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>slight increase</b>
<b>John</b>	<b>6</b>	<b>5</b>	<b>6</b>	<b>5.6</b>	<b>relative stability</b>
<b>Emma</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4.6</b>	<b>relative stability</b>
<b>Julie</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>slight increase</b>

  

<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4.6</b>	<b>relative stability</b>
<b>Ann</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Helen</b>	<b>6</b>	<b>4</b>	<b>6</b>	<b>5.3</b>	<b>relative stability</b>

Once again, as in the case of items 13 and 14, the participants' answers indicate relatively similar, high levels of agreement with the statement in item 15 in both groups. Overall, in both groups, these results also suggest a relative stability or a slight increase in the efforts deployed to adjust the level of concentration depending on the speech rate.

This is how John (LP group) explained his scores (6-5-6):

“That's right. Before, what I would do is I was breaking things down, if I knew a word, like 'depuis', I would be saying: Hey, I know what that word means!, but the conversation went on. Then I found, as I got further into a conversation, I would hear five or six words, and say: Hey, I know the whole phrase!, so I would summarize the phrase, meanwhile, same problem was, the story was moving along. Now, I just take it in as a, you give me a phrase, yes, well then just move on!, and so, I no longer need to analyze and summarize and put it on the shelf so I can do something else. Now, I can keep up and move along with the text”.

In sum, across as well as within the high- and the low-proficiency groups, the students' numerical and stimulated recall questionnaire data indicate relatively similar, high levels of metacognitive awareness concerning the importance of attention and memory in L2 listening comprehension, and either stability or an increase in these learners' attentional efforts.

#### 4.1.2 Students' approach to problem-solving in L2 listening comprehension

Tables 4.4 to 4.10 present students' answers to fundamental questionnaire items pertaining to problem-solving in listening comprehension:

- *I use the words I understand to guess the meaning of the words I don't understand (item 5)*
- *I use the general idea of the text to help me guess the meaning of the words I don't understand (item 19)*
- *I try to guess what will come next as I listen (item 11)*
- *I try to identify the key words as I listen (item 24)*
- *I imagine pictures of what I hear, as I listen (item 25)*
- *I use my experience and knowledge to help me understand (item 30)*
- *I translate word by word as I listen (item 27)*

Table 4.4 : Students' answers to *I use the words I understand to guess the meaning of the words I don't understand (item 5)*

Respondents in LP group	1 <sup>st</sup> admin.	2 <sup>nd</sup> admin.	3 <sup>rd</sup> admin.	average	Tendency
Peter	5	5	5	5	stability
John	5	6	6	5.6	slight increase
Emma	6	5	5	5.3	relative stability
Julie	5	5	5	5	stability
Respondents in HP group	1 <sup>st</sup> admin.	2 <sup>nd</sup> admin.	3 <sup>rd</sup> admin.	average	Tendency
Nick	4	4	5	4.3	slight increase
Ann	5	5	6	5.3	slight increase
Helen	6	6	6	6	stability

The participants' answers indicate relatively similar, high levels of use of linguistic inferencing in both groups. Overall, in both groups, the results also suggest a relative stability or a slight increase in the use of this problem-solving strategy.

Nick (HP group) explained the slight increase (4-4-5) in his use of linguistic inferencing in these words:

“Yah, right, it’s along the lines of common sense. It’s the same thing. And I could probably have put ‘strongly agree’ cause I do that all the time, I’m constantly doing that, so yah, actually, I could have put 6 for that. You know, I’m trying to use general knowledge to interpret the story, the meaning, and I do realize there’s lots of words I don’t understand, so, I do use the other words that I do understand to, um, to reinforce, or to, give me the sense of what the story’s about.”.

Table 4.5 : Students’ answers to *I use the general idea of the text to help me guess the meaning of the words I don’t understand* (item 19)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>John</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Emma</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Julie</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4.6</b>	<b>relative stability</b>
<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>4.3</b>	<b>increase</b>
<b>Ann</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Helen</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>5.3</b>	<b>relative stability</b>

As in the previous problem-solving item, the participants’ answers to item 19 indicate relatively similar, high levels of use of inferencing / elaboration from the general context in both groups. Overall, in both groups, the results also suggest a relative stability, or a slight increase, in the use of this problem-solving strategy.

Table 4.6 : Students' answers to *I try to guess what will come next as I listen* (item 11)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>3.6</b>	<b>increase</b>
<b>John</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>4.6</b>	<b>variability</b>
<b>Emma</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>decrease</b>
<b>Julie</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>3.3</b>	<b>relative stability</b>

  

<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>3.6</b>	<b>slight increase</b>
<b>Ann</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>stability</b>
<b>Helen</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>slight increase</b>

Students' scores for item 11 indicate relatively similar levels of use of prediction in both groups. In their stimulated recalls, low- and high-proficiency students alike reported that they had gained an increased awareness of the prudence required in the use of this strategy in L2 listening.

John (LP group), for example, provided the following explanation for the variability in his scores (4-6-4) for item 11:

“Yes, I used to. When I'd hear something in a conversation in French, before, I would be: O.K., what's coming next?, and what I found that had done to me, is set me up for something I had a preconceived notion of what it was going to be. And all of a sudden, when it didn't come, it rattled my confidence, and then I lost not only what I thought I knew, but the part I had put in there that didn't belong plus what was coming behind it. So now (pronounced with emphasis), I'm trying to say: listen to the conversation, don't (pronounced with emphasis) cut it off, don't prejudge (pronounced with emphasis) it, just let it come, and if you're off base, then maybe the next three or four sentences will give you the point to go back.”.

Ann (HP group) very similarly explained her consistent report of 'slightly disagree' (3-3-3) for item 11:

“It's partly because I'm too busy listening, but also, I think by getting actively involved in the listening, you create false expectations and it can really mislead you.”.

This is how Peter (LP group) explained the increase (2-4-5) in his scores for this item:

“... that's because now, I'm able to comprehend better, I hear it better, so I don't have to go word for word. And so now I can sort of anticipate what's coming next, especially if you understand the topic, so you sort of know, you get thinking where they're going down with, the path... you may have heard the argument before... or you've heard a similar discussion before, then I, I sort of guess what's coming next. But, if I have no idea what the topic is or I never heard it before, obviously, I don't. It depends really. It depends on my own past experiences and knowledge of the topic, where I can guess. Otherwise, I'm not guessing, no. I don't try and guess on a topic I don't know. If I don't know the topic, I'm actually concentrating on the actual text, on what they're actually saying, otherwise, it could backfire...”.

When reviewing her scores for item 11 (4-5-5), Helen (HP group) similarly commented:

“... I've discovered that, like, in a dialogue between two people that we listened to in one of the first exercises, I've discovered, now I find that, I sometimes have to, sort of put aside the identity that I'm giving to the two or more people, cause sometimes that's taken me down the wrong road. Because I can tend to take it as a certain type of dialogue, to think that they're going to disagree or to agree on something, when in fact, it's not that type of dialogue at all. And sometimes, some of the other indicators, you have to be careful of too, so, in some cases, I'd rather just concentrate on the language itself.”.

Table 4.7: Students' answers to *I try to identify the key words as I listen* (item 24)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5.6</b>	<b>relative stability</b>
<b>John</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>decrease</b>
<b>Emma</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4.6</b>	<b>relative stability</b>
<b>Julie</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>slight increase</b>
<b>Ann</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Helen</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>increase</b>

The participants' answers to item 24 indicate very similar, high levels of use of the strategy of key word identification in both groups. Overall, in both groups, the results also suggest a relative stability or a slight increase in the use of this problem-solving strategy.

This is how Emma (LP group) explained her scores (5-4-5) for item 24:

“Yah, now I’m really trying to get the subject quickly, I think with the listening exercises, I’m developing a cleaner strategy, whereas before, I would just be trying to grasp at anything, and you know, listening seems a lot easier now. Of course, I listen to the radio in the morning too, but, since the ones (meaning the listening exercises) we’ve done in class, I think I’m understanding a lot more, and maybe, I’m a lot more confident now too, but I would say, now, when I’m listening, I’ll try to guess what it’s about and then it will continue and I’ll go: “No, no”, and then all of a sudden I’ll hear some key word and then it will all fall into place for me, that’s what I find now, that happens a lot... there’s usually a number of details that are not really all that important, and so, as you listen, you sort of get an idea about what kind of stuff like that might be in what you’re listening to. You try to figure out in the beginning what the subject matter is about, and then, kind of just listen for those details that are most (pronounced with emphasis) important or will give me information, that will feed me back information that will give me a conclusion, overall, so I can come to an overall conclusion... and listening to the radio in French, the news, sometimes, now, I’ll do like we’ve been doing in the exercises, like, when I realize I got something so wrong on the radio, I’ll laugh (laugh) and then I’ll try to figure out: O.K. what did I hear wrong (laugh)?, how did I get it so (pronounced with emphasis and with laugh) wrong? You know what I’ve started doing too? What I started doing is, I’ll listen to the news in English first, and then I’ll flip back to French, and sometimes that will help me later on with the news in French. I gauge that by how, when I’m listening, like, I know more where I need to concentrate... and what’s really interesting too is, I’m finding now, when I’m listening to the news in English, I’m going: Oh, my god! (pronounced with emphasis), like, hearing how (pronounced with emphasis) they’re kind of expressing different opinions in one phrase, like going from a negative to a positive, and there’s all these little innuendos that really (pronounced with emphasis), you have to be so (pronounced with emphasis) in tune to the language to pick that up (laugh), and so, now, I’m wondering: What am I missing in French? Like, how many things like that am I missing in French? And now, I’m wondering: How would a French person understand all those innuendos in English? And how would you say that in French? It’s so difficult, you know! (pronounced in tone of amazement / incredulity)”.

The immediately preceding explanation for her answers in item 24 attests to the efforts expended by this LP group student toward improving her listening comprehension. The preceding explanation also attests to this student’s increasing curiosity and interest for listening comprehension in general, and to her fast-expanding metacognitive awareness. It also clearly attests to the self-directedness of this process.

Similarly to Emma – and in a contrast to his decreasing scores (6-5-4) for this item 24 –

John (LP group) explained:

“... Before, when I would listen to something, it was everything at once, all the words, and I’d try and hear all the words, and you’d comprehend nothing. But now, I find, especially with the exercises we went through in class, I find, O.K.: let me get the topic first, then you search for the topic of the conversation. And you know, I hear the words ‘depuis’, ‘comme’, but I know

(pronounced with emphasis) now, those are not telling me anything, now, I know (pronounced with emphasis), first, I need to get the key (pronounced with emphasis) words, and once I get these key words, everything else will fall in place... before, I would try to listen to everything (pronounced with emphasis), and understand everything, and each word that went by, I was picking it apart, and saying: O.K. got that word, got that word, but at the end of listening to three or four minutes of, any speech, you've forgotten what the topic is, cause you're so focused on translating the words, so now (pronounced contrasted), I think I'm starting to say: O.K., let's be a little more selective here, and I focus on what's pertinent (pronounced with emphasis) to the conversation.”.

Very similarly to Emma's explanation, John's testimony clearly suggests that, the identification of the context having seemingly become to him a more instinctive initial approach, this student was turning his efforts to – concurrently while being attentive to the unfolding of the context – filtering out redundant or inconsequential information, and finding efficient ways of retaining only those details most pertinent to the message.

Table 4.8 : Students' answers to *I imagine pictures of what I hear, as I listen* (item 25)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>Tendency</b>
<b>Peter</b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>4.3</b>	<b>increase</b>
<b>John</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>5.3</b>	<b>increase</b>
<b>Emma</b>	<b>6</b>	<b>2</b>	<b>5</b>	<b>4.3</b>	<b>variability</b>
<b>Julie</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>stability</b>
<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>Tendency</b>
<b>Nick</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>increase</b>
<b>Ann</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>5.3</b>	<b>relative stability</b>
<b>Helen</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>4</b>	<b>increase</b>

The answers to item 25, pertaining to the perceived use of imagery, reveal variation among the students' responses. Interestingly, an increase in the use of this strategy is clearly evident in a number of cases.

Helen (HP group) explained the important increase (1-5-6) in her reported use of imagery in these words:

“Earlier on, if you had asked me: do you visualize?, I would have said no, and that’s what I did (meaning that the respondent first answered ‘strongly disagree’), but then I realized, as I listened to things, I realized that is exactly what I do. Not completely; sometimes, there are things that I don’t think of in a visual way, but yah, I have a lot of visuals that go through my mind. So, that question helped me realize it’s a process that I actually use a lot, whereas I really wouldn’t have said that before.”

Here is how John (LP group) explained the increase (4-6-6) in his scores for this item 25 in the mid-study stimulated recall:

“... before, I would have been more worried about: what does this word mean?, and what does that word mean?... but now, when I hear something.. I can see... all the pictures fall into place and I remember... and as the story’s going along, I’m saying: O.K. I know (pronounced with emphasis) these things, and I can put them in context, cause I can also see the whole thing in my head, so, yes, I think I do. You see, I never before could make the connection between the French language and the history I already knew, which is a very strange thing. And now, all of a sudden, I don’t know, maybe three or four weeks ago, the light came on, and I’m saying: John, you know (pronounced with emphasis) these things, so it’s only somebody who’s talking about it in another language. So, yes, I’m constantly calling in pictures here, cause I do have forty five years of life that I can dive into, and why haven’t I been doing that before?, so. It’s cause we put up this wall, everything’s gone, we put up the wall and we say: That’s English, and now I’m gonna hold a whole new life in French. And that’s not how it works, no.”

In the final stimulated recall, John further confirmed:

“Yes, I wholeheartedly agree more, because again, what I was doing before, is I was taking those snippets of information, let me describe it: Writing it on a blackboard, as a line, much as I wrote my notes (meaning in his listening note-book). Without this piece of paper to write the notes, you try to write something on this blackboard in your mind, but what I find, now, is: paint a picture of what it is you’re listening to, get yourself into the context... and then put all that away... and I can bring the picture back much quicker than I can the list, so... I summarize in my head the information I’ve understood in a whole different way now. Before, it would be the list on the blackboard and let’s try take every word and translate it, and now, it’s: Springtime, that’s the topic, for example, well, every time he says that, now, I don’t need to translate it, I know what it is, it just reinforces the picture I have in my mind.”

Table 4.9 : Students' answers to *I use my experience and knowledge to help me understand* (item 30)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>John</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>5.6</b>	<b>slight increase</b>
<b>Emma</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>5.6</b>	<b>slight increase</b>
<b>Julie</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>

  

<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>3</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>increase</b>
<b>Ann</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>5.3</b>	<b>increase</b>
<b>Helen</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>stability</b>

The respondents' answers to item 30 indicate similar, high levels of use of inferencing / elaboration based on experience and knowledge in both groups. Overall, in both groups, the results also suggest either relative stability or a slight increase in the use of this particular problem-solving strategy.

All students strongly emphasized their increased awareness of the important contribution that one's general knowledge can make in listening comprehension.

Reviewing her scores (5-6-6) for item 30, Emma (LP group) commented:

"... I've noticed that, being able to use your knowledge about the subject, like in the exercises, key words like 'Egypte', or 'fjord', or 'phoque': I've traveled, I knew these subjects, like, that's really huge, and I've really noticed that in the discussions in class too, like, when you've got that knowledge, it's so much easier. Like, in areas that I know a lot about, I'm so much better at getting the speech, like, I can zero in, using my knowledge about, life, or places, cause otherwise, if you don't know much about the subject, you can make up your mind that that's (pronounced with emphasis) what the subject's about and you make the words work, and you can be really wrong. My partner's (meaning in the listening exercises discussions) noticed that too, and the two of us have discussed that a little bit. Because, we've noticed that, I mean, if you don't have the knowledge or if you don't have the subject, you can be really off."

This is how Helen (HP group) explained her consistently high scores (6-6-6) for item 30:

“Yah, yah, because I found that, it really made a big difference, like, it makes it so much easier to listen to things, like, if there are things that I don’t understand right away, like, for example, the bicycling thing (meaning the listening exercise about bicycling), everyone had heard ‘Ireland’, but I had worked with.... and so, I got this sort of secondary expertise in cycling....., and when they mentioned two countries, it was China and Holland, and yah, China made sense to me, and the second country, I didn’t quite get it the first time around either, we all heard ‘Irelande’, and I heard ‘Irelande’ too, but no, it didn’t, it didn’t make any sense, and I got it the second time around, cause I was expecting the Netherlands not Holland, but I knew it couldn’t be Ireland, so, then what else is it gonna be? So I thought again, Netherlands, and then I thought of Holland, that’s what it was, and so, in the next listen, I went: Yah, ‘Hollande’, that’s what it is!, what else could it be?!, yah, ‘Irelande’ and ‘Hollande’, in French, yah, they’re close, so, ‘Hollande’, that’s probably what it is!, and nobody else got it, they all thought it was Ireland and they stayed with that. But when I said maybe it was ‘Hollande’, they all said: Yah! (pronounced excitedly) cause actually, they all knew, but they had stayed with Ireland, but so, yah, it was knowledge of the subject.”.

Table 4.10 : Students’ answers to *I translate word by word as I listen* (item 27)  
(Note that a higher score indicates higher use of word-by-word translation)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>decrease in use</b>
<b>John</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3.3</b>	<b>slight decrease</b>
<b>Emma</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>variability</b>
<b>Julie</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3.3</b>	<b>slight decrease</b>
<b>Respondents in HP group</b>	<b>1st admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3.6</b>	<b>decrease in use</b>
<b>Ann</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2.6</b>	<b>decrease in use</b>
<b>Helen</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>2.6</b>	<b>increase in use</b>

The answers to item 27, pertaining to the use of literal translation – which is generally regarded as detrimental to listening comprehension – reveal variation in both groups. Across the two groups, five respondents reported decreasing use of this approach. However, it is interesting to note that, in the last administration of the questionnaire, Helen, in the high-proficiency group, reported an increase in her use of word-by-word translation.

Helen (HP group) explained this increase (2-2-4) in her reported use of literal translation in these words:

“Translating into English gives me more of a level of certainty... I’ll try to translate more the parts that are problematic, cause I know I’ve made some errors before. Like, when we first started listening to things, I realized I was too confident (laugh), cause I was more wrong (laugh)! So now, I’ve learned that, that I can be a little bit too sure of my ability, and that’s how I’ve sometimes made some errors, like sometimes, there’s a negation, and I’m not hearing it but it’s there, and that changes the whole meaning of course, or a word that perhaps I didn’t know and there was a particular emphasis that I didn’t realize, and I interpreted the general meaning wrong, because I didn’t pay enough attention, or I placed the emphasis on another section and I may have interpreted it all wrong, cause I just went with the general idea, instead of trying to, to um, be a little bit more precise... And I think it’s (still referring to translation) in blocks (pronounced with emphasis) more too, like, there are phrases, rather than word by word, like, our mind understands when a phrase is used. Like, I don’t think of it in terms of bit, like the on - off switch, that it’s only a bit, like, to me, instead of a bit being a word, it can be a phrase once you get to a certain level, so, I do think that the translation process is (pronounced with emphasis) going on, but it’s just a lot quicker, and it’s a lot less forced, and it’s only over certain words, and it happens so quickly that you don’t even realize it unless you stop to really think about it, you know (laugh).”.

In a testimony somewhat similar to Helen’s, Ann (HP group) explained, while discussing her consistent reports of *partly agree* (4-4-4) for a related translation item (No 4 – *I translate in my head, as I listen*):

“I think I do it less and less, but there are still words, that, like, even when I read, I always say them to myself in English after, to be sure. I know I do it for specific ones, like for instance for linking words, I find them so much more difficult, I don’t know why, like ‘however’ – ‘néanmoins’, and all those, words that are not quite concrete but their nuance, they can change the meaning slightly...”.

Two of the high-proficiency students (Ann and Helen) thus described occasionally using the strategy of translation very deliberately, for the specific purpose of ascertaining the accuracy of their interpretation of, in particular: (a) words whose fine nuances, they had noticed, had sometimes led them to confusion or error in comprehension, and (b) words which, they had noticed, although frequently occurring in the L2 speech, had been slower to become automatized, as a result for instance of their unrelatedness to their L1 counterparts.

Discussing his scores (5-5-5) for the same related translation item No 4 (*I translate in my head, as I listen*), Nick (HP group) also somewhat similarly commented:

“Well... what is the option? If you don't translate in your head as you listen, what else would you do? Would it be that you'd just be listening without trying to translate and then just summarize it at the end, would that be the option? I mean, I'm not translating every word (pronounced with emphasis), when I say that, I'm translating the thought (pronounced with emphasis) ... What I'm doing is I'm thinking (pronounced with emphasis) about what I'm hearing, the general sense of what's going on, and it's comparisons and differences, but I'm not, I'm not making a conscious decision to translate, see, that's why I also don't take notes, cause for me, this is not an exercise or a contest of like: can I translate word for word the story? It's: Do I have a general sense? When I say: I translate in my head as I listen, it's that I think about what's being said, as I'm listening. I don't know, I guess maybe that that's the question of whether or not you need to translate from French into English or whether you can just listen to French and think in French, I guess that's the difference, and I don't think I'm there, I don't think I'm able to think in French yet.”.

For his part, John (LP group) explained the decrease (4-3-3) in his use of literal translation (for item 27) in these words:

“Yes, I think as my comprehension has gone up, more and more words are now automatically known to me, and you see, I've curtailed the habit of: every word means, you know, I don't do that any more. What I do is I immediately search for the topic, I know a lot of the words I've heard, so, let's get them out of my head: let's move along, instead of translating words.”.

In sum, across as well as within the high- and the low-proficiency groups, the students' numerical and stimulated recall questionnaire data indicate relatively similar, high levels of metacognitive awareness concerning the most fundamental problem-solving approaches to L2 listening, and either stability or an increase in the use of such strategies as linguistic inferencing, contextual inferencing, keyword identification, imagery, and the use of background knowledge in aid to listening comprehension.

### 4.1.3 Students' use of evaluation in L2 listening comprehension

Tables 4.11 to 4.14 present students' answers to fundamental questionnaire items pertaining to the evaluation of comprehension:

- *When I guess the meaning of a word, I think back to everything else I've heard, to see if my guess makes sense* (item 26)
- *When there are parts I didn't understand in a text, I think back to them at the end of the listening* (item 35)
- *After listening, I check my interpretation to see how much I have understood* (item 38)
- *After listening, I think back to how I listened, and about what I might do differently next time* (item 39)

Table 4.11 : Students' answers to *When I guess the meaning of a word, I think back to everything else I've heard, to see if my guess makes sense* (item 26)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>slight increase</b>
<b>John</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Emma</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>5.6</b>	<b>slight increase</b>
<b>Julie</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4.6</b>	<b>relative stability</b>
<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>increase</b>
<b>Ann</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>increase</b>
<b>Helen</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>slight increase</b>

Within each of the two groups, the respondents' answers to item 26 reveal similarities in the students' reports of comprehension evaluation – based on the overall message – following inferencing or elaboration. Overall, some increase or relative stability in the use of this strategy is apparent across the two groups.

Prompted to elaborate on her high scores for this item 26, Emma (LP group) replied:

“... I'm much more careful now. Like, compared to when we did that first exercise (meaning the first think-aloud). I'm not, I'm trying, to not (pronounced with emphasis) make my mind up too quickly about what it's about. I'm trying to get a whole thing in context, cause I know I'm gonna be hearing it several times, so, I'm trying to hear the whole thing before I make my mind up. And I've noticed I do that too now when I listen to the radio in French and then I go back, and sort of, hear it point by point like, cause I wanna make sure.”.

Table 4.12 : Students' answers to *When there are parts I didn't understand in a text, I think back to them at the end of the listening* (item 35)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>3.6</b>	<b>increase</b>
<b>John</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>slight increase</b>
<b>Emma</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>3.6</b>	<b>slight variability</b>
<b>Julie</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>

  

<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>3.6</b>	<b>increase</b>
<b>Ann</b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>4.3</b>	<b>increase</b>
<b>Helen</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>increase</b>

In both groups, the participants' answers to item 35 indicate similar, relatively high levels of retrospective evaluation of comprehension difficulties following listening. Overall, in both groups, the results also suggest an increase, or relative stability, in the use of this strategy.

Reviewing her scores (3-5-3) for item 35, Emma (LP group) explained:

“Yah, because we're going over it and over it and over it, and so, I want to make sure that I nail those parts, what I'm not getting, I wanna notice what area I'm not getting, I want to understand what I'm missing, and why. And I'm able to understand a lot more now. I would say, on the whole, the first time, I pretty much understand what it's about now, and the second time, I, I just write down the details that I purposely glossed over so I could hear the context, and then, you know we discuss what we've understood, and often, one of us picked up a point that the other one didn't pick up, and it really helps me, cause then, I try and hear (pronounced with emphasis) that section, you know, in the third listen, because, cause now I've realized, yah, that happened, and I didn't pick it up. The discussions are very useful for that, very useful.”.

Here is how John (LP group) explained his scores (4-5-5) for this item 35:

“... before, when I heard something I didn't understand, I'd say: O.K. is that important to the story?, do I need to know it?, and I think I've learned a little to let it go. Um, unfortunately, I may have missed a key part of the story, by doing that, but, by letting it go, it gives me the ability to listen to the rest (pronounced with emphasis) of the conversation and instead, after the last thing, I'll then sit and say: O.K., how does everything else I've heard after that point, what does it do to reinforce it? You know: What did that mean? And I try to go backwards. So, if I hear it and I got it, I'll put it in the picture, if not, I'll go along and hopefully I'll be able to get it a little later.”.

Table 4.13 : Students' answers to *After listening, I check my interpretation to see how much I have understood* (item 38)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>increase</b>
<b>John</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Emma</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>5.3</b>	<b>slight increase</b>
<b>Julie</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>4.3</b>	<b>increase</b>
<b>Ann</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>
<b>Helen</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>slight increase</b>

As in the case of item 35, the participants' answers to item 38 indicate, in both groups, similar, relatively high levels of retrospective evaluation of comprehension following listening. Overall, in both groups, the results also suggest an increase, or relative stability, in the use of this strategy.

Here is how Helen (HP group) explained the slight increase in her scores for item 38:

“Yah, because that was one of the things that became apparent to me, it's that there are occasions when there are strange little holes in what I hear, or where I hear exactly the opposite because I've missed a negation usually, or missed some sort of shift, so now, I'm a little more careful to make sure that I'm not just going merrily along thinking that I got it all first go.”.

Table 4.14 : Students' answers to *After listening, I think back to how I listened, and about what I might do differently next time* (item 39)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>3.6</b>	<b>increase</b>
<b>John</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>increase</b>
<b>Emma</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>increase</b>
<b>Julie</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>stability</b>
<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>slight increase</b>
<b>Ann</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>3.6</b>	<b>increase</b>
<b>Helen</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1.6</b>	<b>slight increase</b>

As in the case of items 35 and 38, the participants' answers to item 39 indicate, in both groups, similar, relatively high levels of use of retrospective evaluation of the strategic approach to listening. In nearly all cases in both groups, the results also suggest some increase in the use of this strategy although fluctuations are apparent in some cases. It is interesting to note that Helen, in the high-proficiency group, reported the lowest levels of use of this particular strategy.

In a sharp contrast to the low scores (1-2-2) which she assigned to her use of retrospective evaluation of comprehension, in the stimulated recalls, Helen explained for example:

“I think I've become more of the opinion now that it's really important to always doubt yourself, yah, yah, I was kind of concerned, because actually, I understand at a high level, usually, and I really figured I had it nailed, and I didn't... and, I wouldn't be really wrong before, but I would be wrong to the extent that it bothered me, and it really bothered me, you know, I started to doubt my own evaluation of my abilities, you know, which is usually pretty accurate, because I usually try to know where I stand in something, so I've had to kind of reevaluate some of the things I believed before.”.

In the mid-study stimulated recall, prompted to elaborate on her increasing scores (2-3) for this item 39, Emma (LP group) replied:

“A little bit, yes, a little bit. I’ve noticed that the strategy that works best for me is to, one, to just sit back and listen, so I can get a general feeling, two, to work out the details, and three, because I’ve usually learned some new information from my partner (meaning in the discussion with a partner, following the second listen), to notice what I’m missing or what I need to know, what I need to hear. Of course, when you read it, it’s so clear, but very often, I’ll hear a word and it will send me off in the wrong direction cause I heard it wrong, so now, I’ll search for that word, find out what it sounds like again, and how it’s written, you know, I wanna recognize the fact that I can hear it wrong, that they sound similar to this other word or whatever... so, I’m trying to read and hear those phrases and those sounds that are more problematic for me, understand what they really mean, that’s what I’m trying to do as well now... When I’m listening to the radio, if there’s an English speaker speaking French, I can understand. Probably, cause they’re speaking the way I read in my mind. Pronouncing. Like, problem is, you can read, and you know right away what it means, but as you read it, you’re probably not quite pronouncing it right, so, I find when somebody’s speaking French who is French, like, sometimes, it’s the way they pronounce it, I think I’m being lost... Sometimes, their pronunciation, um, I think, if I only know the word to see it, I think in my mind, I’m probably seeing it, but I’m not recognizing (pronounced with emphasis) them as they are said... ‘cause unless it’s a word I hear every day in class, or every day on the radio, I really don’t know how to pronounce it, so, I think that affects my listening. A lot... You see, in the first exercise for example (meaning the first think-aloud), what I did wrong there, is I actually assumed (pronounced with emphasis), that ‘grand-mère’ was the subject, I missed (pronounced with emphasis) the actual chess word, and, um, I guess what was happening is that, I wasn’t recognizing very much of it (meaning of the text), whereas now, I think I hear more, even of the words, and I’m able to hear, when, what is the subject. I’m not sure what happened there (meaning in the first think-aloud), but I wasn’t even able to pin, even the subject down exactly, because I thought the ‘grand-mère’ (laugh) was it (laugh), and I just built the whole story around that and I made all the other words fit in it.”.

Emma’s explanation reveals that this LP student expended considerable efforts toward analyzing and rectifying her strategic approach to listening, from numerous points of view. Emma’s increased metacognitive awareness and self-regulation is clearly apparent, for example, from her description of how she assiduously sought to discover and to understand why she sometimes heard or understood incorrectly. It is interesting to note that, through this process, this student noticed having gained a new awareness of, for instance, some of the differences between aural perception and written comprehension, and some of the corresponding differences between the internalized representation of the pronunciation of words in native versus L2 speakers and readers. Emma explained in detail, in her stimulated

recalls, that this new awareness assisted her in identifying the sources of some of her comprehension difficulties, and assisted her in tailoring strategies and an approach which could help her solve some of her particular listening problems.

In the mid-study stimulated recall, John (LP group) shared the following reflections on the increase in his scores (4-6) for item 39:

“Yes, and I'll go back to, let's take the one about the chess (meaning the first think-aloud text, about chess, which was replayed and analyzed as the first of the listening exercises): you know, in class, once I got a light to click, everything just fell in place for me. So. But then I started to say: I should (pronounced with emphasis) have known the name of that world chess champion, I mean, that's within my time, within my history, and once I connected chess to the name, I knew what I should have at some point done was take that name and know exactly what they were talking about. Again, I think what happened is, in my quest to understand everything, the things I even knew, I put away, cause I knew that name, but I didn't stop to think for a minute how it worked in context, again, I think I was too worried about the definition of the words, that's all. It's just a little odd to realize.”

In sum, across as well as within the high- and the low-proficiency groups, the students' numerical and stimulated recall questionnaire data indicate relatively similar, high levels of metacognitive awareness concerning comprehension evaluation in L2 listening, and either stability or an increase in the use of such fundamental strategies as verification of inferences and elaborations based on contextual information, verification of overall comprehension during as well as following listening, and retrospective analysis of the strategic approach to listening comprehension.

#### 4.1.4 Students' affective control, perceptions, and beliefs, in regards to L2 listening comprehension

Tables 4.15 to 4.17 present students' answers to fundamental questionnaire items pertaining to their affective control, perceptions, and beliefs in regard to language learning and listening comprehension:

- *When I have trouble understanding, I tell myself that I'll manage and do fine* (item 32)
- *I don't feel nervous when I listen to French* (item 17)
- *I feel that listening comprehension is a challenge for me* (item 43)

Table 4.15 : Students' answers to *When I have trouble understanding, I tell myself that I'll manage and do fine* (item 32)

Respondents in LP group	1 <sup>st</sup> admin.	2 <sup>nd</sup> admin.	3 <sup>rd</sup> admin.	average	tendency
Peter	5	5	4	4.6	relative stability
John	3	4	5	4	increase
Emma	5	5	5	5	stability
Julie	2	4	4	3.3	increase

  

Respondents in HP group	1 <sup>st</sup> admin.	2 <sup>nd</sup> admin.	3 <sup>rd</sup> admin.	average	tendency
Nick	3	3	5	3.6	increase
Ann	2	4	4	3.3	increase
Helen	4	4	6	4.6	increase

The students' reports of self-encouragement in the face of comprehension difficulties (for item 32) show a general similarity in answers across the two groups, with either a slight increase or relative stability in the learners' use of self-encouragement.

Ann (HP group) explained the increase in her scores (2-4-4) in these words:

“Yah, I think um, perhaps if you're more positive about being able to understand, then you'll pay more attention, whereas if you think you're not going to be able to understand it, it

becomes a self-serving prophecy. I don't know if I'd say that it plays a huge role, but it plays a part."

Table 4.16 : Students' answers to *I don't feel nervous when I listen to French* (item 17)  
(Note that a higher score corresponds to a higher level of agreement with this statement)

<b>Respondents in LP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Peter</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4.6</b>	<b>increase</b>
<b>John</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>decrease</b>
<b>Emma</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>increase</b>
<b>Julie</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>stability</b>

  

<b>Respondents in HP group</b>	<b>1<sup>st</sup> admin.</b>	<b>2<sup>nd</sup> admin.</b>	<b>3<sup>rd</sup> admin.</b>	<b>average</b>	<b>tendency</b>
<b>Nick</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>3.6</b>	<b>increase</b>
<b>Ann</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>3.3</b>	<b>increase</b>
<b>Helen</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>stability</b>

Except in the case of John (LP group), students' responses to item 17 suggest stable levels of comfort in listening, or a reduction in the nervousness experienced in listening comprehension.

John explained his perception of increased nervousness while listening in these words:

"That's right. Two reasons. One, before, when I listened to French, I was nervous when I started listening, but what would happen very early into a news article or a dissertation from the professor or whatever it was, you'd give up, so your nervousness went away with it. But now that I think I know a little, a little knowledge is dangerous, now that I think I know a little, I get nervous, because I'm thinking: Hey, I should be able to pick this up quickly, cause I know a lot more of those words, so, I guess it's an internal nervousness that I'm causing myself as I stress myself out over everything, but I think it's part of my nature. When I didn't know anything before, like, ignorance is bliss, right? (pronounced in ironic tone of voice): Talk away, I don't understand what you're talking about (pronounced in ironic tone of voice), but now that I know some of it, I get a little more nervous because I think also that people are also expecting me to know a little bit more, so, in conversation, if Simon (pseudonym for LP group participating instructor) asks a question in class, he'll ask it more in his normal tone of voice now than he probably would have for us a few weeks ago when we were starting and every word was clearly enunciated. He doesn't do that any more, and now, I'm: O.K. now listen carefully, cause you should (pronounced with emphasis) know these things, so it all makes me a little more nervous. So, I most definitely expect that, you know, through osmosis (laugh), if nothing else, you should be able to understand more, and therefore, I put a little bit more

pressure on myself. But I, I, it's a good thing, because, for example, it makes you look up some words after class, you know, like, what could they really mean by that?, or what does that word really mean?, so it's not a bad thing, it's a good (pronounced with emphasis) thing.”.

Interestingly, John thus reported that he had no previously existing nervousness, for the reason that he had previously tended to give up in the face of difficulty in L2 listening, and that stopping to listen brought an end to any nervousness. John reported that his gradually increasing general language proficiency brought on an increase in his nervousness while listening. It appears that this was due to the fact that John's reassessment of the difficulty presented by L2 listening, and his reassessment of his listening abilities, led him to realize that he had underestimated the difficulty of listening, and thus underestimated the requirements for the acquisition of fluency in L2 listening. This realization led John to set higher personal expectations and goals, based in part also on a new perception of higher external expectations, which, in turn, placed higher pressures and demands on this learner, in turn resulting in his experiencing higher levels of nervousness while listening. Another interesting insight from John's testimony is that, in contrast to what might have been expected, this student perceived his increased nervousness as beneficial to the refinement of his L2 listening skills. Indeed, in this student's view, it is this increased pressure which prompted him to – in parallel to the efforts he deployed in the class listening exercises – take further development of his listening skills into his own hands, by doubling his efforts and adapting or tailoring, to his specific needs, additional tasks which could hasten the improvement of his listening skills.

Prompted to explain – conversely – the reduction in his reported nervousness while listening, Nick (HP group) responded:

“Right, I do. It’s been very interesting, this experience (meaning the listening training), because I know the first time, I was very nervous, and I find I’m less and less nervous each time I listen. I’m also more aware of the fact that, um, for example, when I’m tired or if I’m stressed about something, I find it quite difficult to concentrate, to focus... before, I was so uptight, cause I was so afraid I wasn’t gonna get it, and I just thought: how am I gonna do it?, whereas now, I’m just: Well, just try your best!, just see what you can do!, and be calm!... And so, like, the one (meaning the listening exercise) on..., I didn’t understand most of it, I didn’t know most of the vocabulary, and I made a note of that in my book (meaning in his listening note-book), but that doesn’t bother me any more, cause the two (meaning the two listening exercises) before that, for example, I did really well, and I made a big note of that in my book, cause I felt good about that, cause I understood a lot... now, even in situations where it’s stressful, I’m able to just be much more relaxed, generally, yah, I used to get really hung up on what other people knew that I didn’t, in my class for instance, cause some of the others are, are that much further ahead, but now, I’ve just realized: Don’t worry about that!, just do what you can do! Now, I don’t worry about all the details any more. Now, for me, it’s an achievement just to know the general sense...”.

Nick’s comments are interesting from several points of view. First, this student reported that, previously – unlike John, for example – he often experienced high levels of nervousness in listening. Second, he reported an increased awareness of the negative effects of stress and fatigue on his ability to concentrate in listening comprehension, and an increased awareness of the importance of assiduous attention and relaxation while listening. Third, Nick reported a substantial decrease in the nervousness he experienced in listening. Fourth, Nick explicitly ascribed the improvement in his ability to control his nervousness, and to sustain greater attention and relaxation while listening, to the experimental exercises. Fifth and most interesting perhaps, is Nick’s report that, as a result of the listening exercises, he was able to accept the fact that L2 listening inevitably consists of both failures and successes, and he was consequently able to set more reasonable expectations and goals for his listening performance, based no longer on comparisons of his prior performance or perceived potential with those of students of higher proficiency in his group, but based, instead, on his best efforts and self-encouragement.

Table 4.17 : Students' answers to *I feel that listening comprehension is a challenge for me* (item 43)  
(a higher score corresponds to the perception that listening presents a higher challenge)

Respondents in LP group	1 <sup>st</sup> admin.	2 <sup>nd</sup> admin.	3 <sup>rd</sup> admin.	average	tendency
Peter	6	5	5	5.3	slight decrease
John	4	4	5	4.3	slight increase
Emma	2	2	4	2.6	increase
Julie	3	4	2	3	variability

  

Respondents in HP group	1 <sup>st</sup> admin.	2 <sup>nd</sup> admin.	3 <sup>rd</sup> admin.	average	tendency
Nick	5	5	4	4.6	slight decrease
Ann	6	5	5	5.3	slight decrease
Helen	2	4	1	2.3	variability

The students' reports for item 43 reveal variability across, as well as within, the two groups. It is interesting to note, in particular, that the students' respective proficiency levels did not necessarily influence their perceptions of the relative difficulty presented for them by L2 listening comprehension.

In the mid-study stimulated recall, Helen (HP group) provided the following explanation for the increase (from 2 to 4) in her scores for item 43:

"I thought I understood almost everything in French, and now I don't agree. So, it's a challenge, although I think the word challenge is a strong word, in some ways, and I didn't see it as a challenge (pronounced with emphasis) but as something that I need to attend to. Now I've come to understand that, maybe I have been a little overconfident in my ability, so, yah, I could characterize it as a challenge, in that I need to remind myself that, just 'cause I have a fairly good facility, that doesn't mean that it doesn't need work, and maybe not a fair bit of work, but a significant amount of work, to ensure that I don't, make mistakes."

In the end-of-study recall, Helen confirmed that her perception of the difficulty presented for her by listening comprehension had returned to a low level (1).

When prompted to elaborate on her comparatively high scores (6-5-5) for item 43, Ann (HP group) explained that she found that “repeating the exercises [was] useful”, that it made her feel that she “had accomplished more”, because her other listening practice was largely confined to television shows. She explained that often, in the latter listening circumstances, she understood “very little because of the different background noise... and all the different accents and their enunciation isn’t always great”... In these circumstances, Ann reported that she “wasn’t happy” with herself because at times she understood “almost nothing”.

In the mid-study stimulated recall, John (LP group) commented:

“...because... as you learn more..., now, in a ten minute conversation, I can understand at least half of it, but I’m still missing, I’m missing some of the details, and it’s frustrating... because, ever since I’ve started the program, I’ve always listened to the news in French in the car in the morning, but now, I’m trying to find ways that I can trick the language: O.K. you said it this way, well now, I’m gonna listen to your buddy in the morning, and see what he says to me, and then I’m gonna check this all against English, you know, it’s fun, so I’m trying to keep it fun too, cause otherwise, you go to class every day and you go through the same things day after day after day after day... I loved the listening. It’s been fun, it really has. It’s very enlightening, very, very enlightening... I thought it was easier than reading (pronounced in deliberately ironic tone of voice), um, cause I didn’t know enough, and um, what, could have been, a very demotivating thing was a trigger for me, instead, you know: This, is fun, and I’m not gonna get caught in class next time, because I’m gonna want to have the answer...”

Reviewing his scores (4-4-5) for item 43 in the end-of-study stimulated recall, John added:

“... I no longer think that listening in French is more difficult than reading, speaking or writing in French, and the reason I say I disagree with that statement now is I put a lot of effort into listening, I spent a lot of time listening to the radio, listening to French T.V., purposely, but what I’m finding now is I’m closer to being put into a position where I must speak the language more, and I’m starting to say: O.K. your comprehension has come way up, I think it has, but my ability to speak I don’t think has grown as fast, so now I’ve changed my priorities and I’m saying: Speaking now is my goal, and therefore it’s the hardest. So, listening still needs practice, still needs work, no doubt about it, but it’s not what it was at one time. It’s interesting to see the changes as we, as we grow (laugh)! (pointing to his questionnaire answers across the three administrations) What an awesome idea, to get comprehension off of anyone. You’ve made it fun, you’ve made it competitive, you’ve made it a group effort, and nobody was singled out.. What we learn at school every day is describe your job, describe your tasks, where you live, how long have you worked, that sort of thing. So, there’s a big difference here, and in my opinion, that’s made me stretch quite a bit, stretch to learn more. I’ve had to go look up a lot of words, I’ve learned a lot of new vocabulary... I think this was amazing because without this program (meaning the listening training), I don’t think I would have gone and looked up these words, or spent as much time listening to French news, cause I’d probably still be saying: What the heck are they talking about?...”

In sum, across as well as within the HP and LP groups, the students' numerical and stimulated recall questionnaire data indicate relatively similar, high levels of metacognitive awareness concerning the importance of self-encouragement and self-confidence in listening, with either stability or a slight increase in the use of self-encouragement, and, in all cases but one, stable levels of comfort or a reduction in the nervousness experienced while listening. A greater variability is apparent in students' perceptions of the difficulty posed for them by L2 listening comprehension. Over the course of study, most students reported a decrease in their perception of the level of difficulty which listening presented for them. It is interesting to note, nonetheless, that the students' respective proficiency levels did not necessarily influence their perceptions in this regard.

#### **4.1.5 Summary of findings from the questionnaire data**

The first research question which was examined in this study is:

What are the effects of a self-regulatory approach to listening comprehension development on language learners' (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension?

The students' numerical and stimulated recall questionnaire data provide a number of answers to this first research question.

First, overall, over the course of the study, across and within both groups, the participants' numerical questionnaire data indicate relatively similar, high levels of metacognitive awareness concerning:

- the importance of attention in listening;
- the appropriate problem-solving approaches to listening comprehension;
- the importance of evaluating one's comprehension during and/or following listening; and,
- the importance of factors such as self-confidence in listening comprehension success.

Second, overall, over the course of the study, in both the low- and high-proficiency groups, the participants' stimulated recall protocols on the questionnaire demonstrate a relative stability or, in many cases, an increase/improvement in the following aspects of metacognitive awareness, strategy use, and self-regulation:

Metacognitive awareness:

- awareness of individual strengths and weaknesses; and,
- awareness of the requirements and particularities of L2 listening comprehension;

Strategy use (presuming metacognitive and strategic knowledge):

- attentional efforts;
- judicious attentional focus while listening (in particular: judiciousness in the focus on the identification of keywords / context and the filtering out of secondary details);
- efficiency in the consignment of the speech stream to working memory through strategies such as mental visualization;
- judicious use of translation;
- use of inferencing based on linguistic, contextual and general knowledge, and logic;
- use of self-questioning following prediction, inference or elaboration;
- verification of predictions, inferences and elaborations based on logic and contextual, general, or related linguistic knowledge;
- retrospective evaluation of comprehension; and,
- reflection on the appropriateness of the strategic approaches to listening comprehension;

Self-regulation (presuming metacognitive and strategic knowledge):

- setting of higher personal expectations in listening comprehension;
- setting of increasingly challenging listening comprehension goals;
- expending efforts toward listening practice and developing listening skills, independently from the language learning context; and,

- tailoring of listening practice to the individual strengths, weaknesses and specific corresponding needs, independently from the language learning context.

In addition, the participants' numerical and stimulated recall questionnaire data demonstrate a relative stability or, in many cases, an increase/improvement in:

- self-confidence; and,
- general interest and enjoyment in L2 listening.

The students' stimulated recall protocols on the questionnaire also provide preliminary insights into the third research question, pertaining to the students' perceptions and attitudes toward the listening approach investigated. These data indicate that, overall, in both groups, the students responded positively to the self-regulatory approach to listening comprehension development investigated in this study. Indeed, as could be seen from the stimulated recall protocols, several of the students ascribed improvements which they perceived in their listening comprehension and their enhanced interest and increased efforts to various aspects of the listening training.

## **4.2 Results from the think-aloud protocols**

### **4.2.0 Introduction**

In order to probe more deeply and more directly into the students' listening comprehension, metacognitive awareness, self-regulation, and strategy use, concurrent think-alouds were conducted at the very beginning and at the end of the study. These individual think-aloud sessions required the participants to describe their thought processes as they listened to short

aural texts in French (see Appendix D). The students' think-aloud protocols provide detailed answers to the first and second research questions.

Given the abundance of data collected in this study, the presentation of the think-aloud data focuses on the protocols from the two students in each group who were most able to verbalize their linguistic processing with a level of detail.

#### **4.2.1 Examples of metacognitive awareness, linguistic processing, and listening comprehension reported by the students in the high-proficiency group in the beginning-of-study think-alouds**

##### **4.2.1.1 Excerpts from Helen's beginning-of-study think-aloud data**

Here are excerpts from Helen's concurrent protocols in her first listen to the first think-aloud task, beginning with the opening lines of the text:

*"Monsieur, pouvez-vous essayer de me décrire la journée d'une de vos clientes? J'arrive et je gare ma voiture?"*

*"Ha, non! C'est dépassé, tout ça! Vous arrivez à l'entrée du parking et vous descendez de votre voiture."*

OK, the female is asking to describe a day in one of the clients', of one of the clients, and then she said something about coming to the, like, to the parking, parking her car or whatever, and he addresses her: "No!", but I wasn't clear in the last part, but you go to the parking, you go down to, and then I wasn't clear in the last bit.

*"Donc, nos clientes n'ont aucun effort à faire."*

*"Oh! Qu'est-ce qu'on ne fait pas avec la technique moderne! Mais, je suppose qu'on se promène dans les rayons et qu'on prend ce qu'on veut."*

*"Heu, oui et non. Il y a deux formules. La formule A, pour les gens pressés : vous mettez votre carte dans une machine, puis vous appuyez sur les boutons correspondant aux marques des produits désirés. Ceux-ci arrivent alors automatiquement dans votre chariot par l'intermédiaire d'un tapis roulant."*

OK, there's two, she said, um, you know, she's congratulating him on the new, on using the new modern technology, and she said: "OK, well then, I guess we just go through the department and just take what we want", and then he goes: "Yah, well, no: there's two ways of going through it", and the first one - A - is for people that are very, like, rushed for time: and they select what they want and it's brought to them on a, like a moving sidewalk type of thing.

In the second above example a little further into the text, Helen's report of her on-line comprehension is an almost perfect, nearly simultaneous English interpretation of the French segment which she had heard for the first time only seconds before. Her 'rendition' of the French text even includes long segments of dialogue accurately interpreted verbatim. Her comprehension in fact appears to have taken place so quickly and effortlessly that the student did not verbalize any intermediate processing step between her initial perception of the French text, and her reporting of her comprehension in English. Her report also indicates that she correctly inferred some of the words which were unknown to her, such as 'tapis roulant' (conveyor belt), even if the time constraints of the think-aloud reporting did not always allow her the time to arrive at their exact, idiomatic equivalent ('moving sidewalk type of thing').

*"Et la formule B?"*

*"La formule B est pour les gens qui ne sont pas pressés. Ceux-ci peuvent parcourir les rayons, mais il y a une innovation : vous n'avez pas à prendre les produits vous-mêmes. Vous appuyez sur un bouton et un éjecteur automatique dépose doucement la marchandise désirée dans votre chariot. Là encore, aucun effort."*

OK, the second is for people that have more time, and they can go throughout the departments that they want, wish, but even then, when they see something that they want, they don't have to get it: they push a button and it's, well (laughter), it ejects itself (laughter), I don't know how they do that, but, into the cart, so, again, there's no effort on the part of the, the customer.

All of the observations made in the examination of the previous example similarly apply to the above excerpt. Once again, Helen reached a nearly complete, and entirely accurate understanding of all essential key points in the French passage, with sensitivity to nuances, and to the humor in the message, while remaining perfectly aware of having missed one explanatory part of the passage, although this particular missed detail in no way hindered her

accurate interpretation of the overall message. The laughter punctuating the student's report further highlights not only her astute comprehension, but also illustrates a relatively low level of nervousness in the performance of the cognitively demanding, dual think-aloud and listening tasks.

*"C'est en effet une façon reposante de faire ses achats!"*

*"Mais, nous avons tout prévu! Chaque rayon repose sur un système hydraulique. A chaque fois que vous retirez une unité du rayon, le poids varie. Chaque variation de poids est enregistrée par notre calculatrice électronique."*

OK, that was a little, a little less clear to me but um, he's saying that it's relaxing, that they've foreseen every type of thing. I believe that that the system is hydraulic, and that each, like each item, would be, um, they would know the weight and whatever, and they would take that into consideration, to, for the working of the system.

In this example, it appears, judging by the greater number of hesitations punctuating her report, that perhaps a greater percentage of the vocabulary may have been unknown to Helen, or that, perhaps, she was taken aback by the unexpected relative complexity of this passage. Nonetheless, although her comprehension was less complete for this segment, her report still highlights a perfectly accurate understanding of the general meaning of this more difficult segment. It is clear, in particular, that, once again, Helen did not allow those parts which were unclear to her to distract her from listening to the passage in its entirety, and from correctly drawing the logical general meaning out of the message.

*"Il nous est ainsi possible de savoir immédiatement si le chèque est approvisionné ou non. Si le chèque est sans provisions, la machine alerte aussitôt l'un des cinquante inspecteurs qui patrouillent dans le magasin. Celui-ci vous conduit alors au tribunal le plus proche, pour recevoir un jugement rapide."*

(Laughter) Um, they can tell right away whether you've got enough funds or not, if you don't (pronounced with emphasis) have enough money for the cheque, the system alerts one of fifty, um, people that are in the area, and they come and they, they bring you to a tribunal immediately, for an immediate judgment.

*"Le personnel n'a pas une efficacité de cent pour cent et il se met en grève. La machine, jamais!"*

*“Oui, et bien, moi, voyez-vous, je préfère quand même mon petit épicier du coin. Au revoir, monsieur, et je vous souhaite de ne pas avoir trop de pannes d’électricité!”*

(Laughter) Um, he says, well, because she said that, you know, “you don’t have any staff”, so, he says like: people, like, you can’t trust people, like, they’ll go on strike, and, um, but machines are never on strike, and, so she says: well, you know, that’s true, but really, I prefer to go to my corner grocery store, and she basically wishes him luck with whatever, but she hopes that they don’t have an electric power outage.

At the end of her first listen, before proceeding to hear the text a second time, Helen added these explanations:

Well I think I’m picking up most of the conversation, like, I think I’m picking up most of the words, there’s not a lot that I don’t really know, and, like, it was easy early on to get the sense that this was like, um, kind of a little bit of a role play about a very futuristic store, with a very futurist system. Um, when he talked about, I guess, first of all, when he said that it was like a hovercraft, that the little carts were like hovercrafts, that was very futuristic (Laughter). And also that a lot of it would be tongue in cheek, ‘cause I mean that’s just, it’s kind of hilarious in its own way, you know: it would make more sense to just push a button to have it brought to you, you know, than to have a little hovercraft running around. But when he talked about the hydraulics, well I had a little bit of trouble at first with this word, but then I thought: well, what kind of a system would that be?, well, that’s the one, well, I’m assuming I got that correctly. And a lot of the rest of it, like a “tapis roulant”, well, that’s kind of self-explanatory even though I don’t think I’ve ever heard it before, but because it’s a carpet that rolls, well, I mean, what would that be in a futuristic place? I mean, you know, if it had been in, I don’t know, in an old Victorian mansion in the 1800s, then I might have said it was a carpet that rolled up at the edges, but in this context, it made more sense that it was a rolling carpet. My notes definitely helped me too, cause I have an awful short-term memory, so, I might have understood, but not been able to tell you what they said, um, like, if there are three or four concepts in the, like, where was it: somewhere here (pointing to one of many very neatly organized columns of key words in her notes), I didn’t mark down one word, and I lost that idea immediately. You know, if I don’t arrange them, I don’t remember. Like in this one, here, where it was A and B: I had the time, so I wrote, that’s my short for ‘Formule’ (pointing to a specific abbreviation in her notes, header of a neatly organized column of a few key words), and then A and then all the different ways of doing it (pointing to two separate, neatly organized columns of a few key words corresponding to Formulas A and B from the French text), but if I didn’t have time, I just put a little arrow or something else, but like, usually, I write down just words in short. Yah, I mean, when I’m at meetings, even in class, if I don’t take notes, I wander a bit, yah, my mind just wanders. Like: something that amuses me, like the idea of the hydrofoil, hovercraft, you know, would have, and like, actually, immediately, I thought of something else to do with a hovercraft, in Halifax, so, if I don’t take notes, I might, you know, I might just go off on that, on a tangent, and not continue to listen or remember what I heard any more.

Helen’s metacognitive awareness, self-regulation, and her resourcefulness in the use of listening strategies are clearly evident, if one examines her above summary of comprehension segment by segment:

Well I think I'm picking up most of the conversation (general comprehension evaluation, awareness of level of understanding), like, I think I'm picking up most of the words (lexical knowledge and lexical comprehension assessments, awareness that comprehension was reached in large part owing to prior lexical knowledge), there's not a lot that I don't really know (assessment of relative proportion of gaps in comprehension, awareness of high level of comprehension), and, like, it was easy (evidence of assessment of task difficulty) early on to get the sense that this was like (evidence of a focus on general context and text type identification early into the listen), um, kind of a little bit of a role play about a very futuristic store, with a very futurist system. Um, when he talked about, I guess, first of all, when he said that it was like a hovercraft, that the little carts were like hovercrafts, that was very futuristic (use of general knowledge, logical deduction, and selected key words to establish context and general text type). And also that a lot of it would be tongue in cheek, 'cause I mean that's just, it's kind of hilarious in its own way, you know: it would make more sense to just push a button to have it brought to you, you know, than to have a little hovercraft running around (continued use of logic and general knowledge in task / text assessment and comprehension). But when he talked about the hydraulics, well I had a little bit of trouble at first with this word (evidence of comprehension monitoring and problem-identification), but then I thought: well, what kind of a system would that be? (self-regulation in the face of comprehension difficulty: use of self-questioning / inferencing / elaboration based on logic and general knowledge) well, that's the one, well, I'm assuming I got that correctly. And a lot of the rest of it, like a "tapis roulant", well, that's kind of self-explanatory even though I don't think I've ever heard it before, but because it's a carpet that rolls, well, I mean, what would that be in a futuristic place? I mean, you know, if it had been in, I don't know, in an old Victorian mansion in the 1800s, then I might have said it was a carpet that rolled up at the edges, but in this context, it made more sense that it was a rolling carpet (once again, use of self-questioning using logic and general knowledge in inferencing / elaboration initiated in order to compensate for a gap identified in lexical knowledge, followed by verification of inference / elaboration based on logic, general knowledge, and context of aural message). My notes definitely helped me too, cause I have an awful short-term memory (awareness of personal factors affecting listening capabilities, and evidence of self-regulation and planning in remedying these weaknesses by supporting comprehension and memory with written notes) so, I might have understood, but not been able to tell you what they said, um, like, if there are three or four concepts in the, like, where was it: somewhere here, I didn't mark down one word, and I lost that idea immediately (evidence of monitoring, comprehension evaluation, and awareness of efficiency in note-taking as well as in listening). You know, if I don't arrange them, I don't remember. Like in this one, here, where it was A and B: I had the time, so I wrote, that's my short for 'Formule', and then A and then all the different ways of doing it, but if I didn't have time, I just put a little arrow or something else, but like, usually, I write down just words in short. Yah, I mean, when I'm at meetings, even in class, if I don't take notes, I wander a bit, yah, my mind just wanders (evidence of awareness of personal factors affecting concentration and memory capabilities beyond L2 listening contexts). Like: something that amuses me, like the idea of the hydrofoil, hovercraft, you know, would have, and like, actually, immediately, I thought of something else to do with a hovercraft, in Halifax, so, if I don't take notes, I might, you know, I might just go off on that, on a tangent, and not continue to listen or remember what I heard any more (further evidence of awareness of personal factors affecting listening capabilities and further evidence of self-regulation in trying to remedy these weaknesses).

Helen's immediately retrospective report between the two listens thus provides further confirmation of her metacognitive awareness, self-regulatory abilities and skilful strategy use, all of which were also clearly evident from her numerical and stimulated recall questionnaire data (see for example Helen's questionnaire recall protocols for item 30, in section 4.1.2, or for item 38, in section 4.1.3). In this brief reflection, Helen provided a

perfectly accurate self-evaluation of her level of comprehension in the first listen.

Interestingly, she retained a very good memory of the few minor obstacles that she had encountered, and was able to very clearly describe how she had easily overcome these obstacles, mostly through common sense, and general or contextual knowledge. Her brief reflection reveals that she was able to distance herself from the text and word level of the listening task to the considerable extent that, very early into the first listen, she accurately perceived that the passage was ‘tongue in cheek’ as she characterized it, based, for example, on her critical assessment of the utility or judiciousness of hovercraft-inspired carts in the context of a fully automatized store. Helen’s keen metacognitive awareness, her self-regulation, and her resourcefulness in the use of listening strategies are also clearly evident in her knowledge of, and attention to, the personal factors which can hinder her listening comprehension. In her brief reflection, Helen explained, for example, that she had short-term memory problems, and occasional difficulties sustaining concentration on task. To lessen the risks that these personal handicaps could hinder her comprehension in the listening task, she took very organized notes of key words, and of the logical articulations in the message, throughout the task. Helen reported being keenly aware of the extent to which these notes assisted her comprehension and her detailed recollection of the message.

Here is a final example of further comments Helen added, this time, in the second listen to the first think-aloud task:

*“Merveilleux! Alors, ensuite, j’arrive dans le magasin et je prends un chariot à provisions, j’imagine.”*

*“Heu, oui, mais alors, là, une surprise.”*

*“Ah?!”*

*“Nous avons abandonné ces vieux chariots qui grincent et qui ne veulent jamais aller dans la*

*direction que l'on veut.*

OK, so, he's saying, I was thinking originally that he was talking that they had only gotten rid of some (pronounced with emphasis) of the old ones, but he means they've gotten rid of all (pronounced with emphasis) of the old ones that, you know, would like squeak and not go where you want them to go. Not just the ones than didn't but all of them, cause he's implying that none of them went the way you wanted them to. Originally, I thought they just wanted to make sure there were no defective ones. Originally, it didn't occur to me there'd be a different kind of cart, that there'd only be the type with wheels, so therefore, I thought there's some that are OK and some that aren't. So, I had assumed he was just telling her they'd made sure there were no defective carts in their store. That there were only the good ones. Now, I trust more in what I understood, and so, now, I'm trying to concentrate, like, verify what I heard, and I'm concentrating more on the segments that, kind of grayed out for me a bit, and I think I'm understanding more now.

Helen was the student whose numerical and stimulated recall questionnaire data suggested the highest level of metacognitive knowledge, self-regulation, and strategy knowledge among all participants. In particular, her stimulated recall data suggested a skilled, concerted use of listening comprehension strategies. Helen had also reported possessing a good level of overall listening comprehension in French. From the very first listen to the first think-aloud text, the linguistic processing which Helen reported while listening indeed clearly supports the high metacognitive awareness, high self-regulation, skilled concerted use of listening strategies, and high accuracy in comprehension which she also reported in her questionnaire data. In particular, her think-aloud protocols illustrate her crucial ability to correctly identify the macro- and micro-contexts within an L2 aural passage, based on a judicious, concerted use of her relatively wide knowledge of L2 vocabulary, and inferencing based on contextual clues, personal general knowledge, and common sense.

#### **4.2.1.2 Excerpts from Nick's beginning-of-study think-aloud data**

Here are think-aloud excerpts, now, from Nick, the second student from the high-proficiency group who was most able to verbalize his linguistic processing with a level of detail. Nick's

concurrent think-aloud protocols in the first listen to the first think-aloud text are presented beginning, as in Helen's case, with the opening passage:

*"Monsieur, pouvez-vous essayer de me décrire la journée d'une de vos clientes? J'arrive et je gare ma voiture?"*  
*"Ha, non! C'est dépassé, tout ça! Vous arrivez à l'entrée du parking et vous descendez de votre voiture."*

I, froze, cause, I didn't hear the very first couple of words, so I got nervous, and I, I did not, I, I know that he, that she was asking him to describe the responsibilities, or the day, a typical day of, of a client, but I, I froze, so I didn't listen to it properly. I don't know what we can do about that.

Researcher: That's no problem at all, and besides, you may well understand it better in the second listen. Don't worry about it.

Nick: OK.

A clear contrast between Nick's and Helen's reports is immediately evident, in the level of nervousness explicitly reported by Nick, and in the negative influence this nervousness had on Nick's ability to concentrate or to remember the segment in its entirety. This is perfectly consistent with the nervousness which Nick described in the questionnaire stimulated recalls (see, for example, Nick's stimulated recall protocols for questionnaire item 17, in section 4.1.4).

Let us examine Nick's think-aloud report as he was proceeding a little further into the first listen to the first think-aloud text:

*"C'est en effet une façon reposante de faire ses achats!"*  
*"Mais, nous avons tout prévu! Chaque rayon repose sur un système hydraulique. A chaque fois que vous retirez une unité du rayon, le poids varie. Chaque variation de poids est enregistrée par notre calculatrice électronique."*

Oh boy!, I think each department has its own way of dealing with the situation. Um, but I didn't get any more than that.

*Nous avons donc ainsi, pour chaque rayon et pour chaque produit, un état automatique du stock. D'autre part, nous pouvons vérifier immédiatement si le chiffre d'affaire réalisé dans la journée correspond bien à la baisse enregistrée dans le stock."*

OK, it's a way I think of taking stock by comparing the, the numbers, the, um, prices, or the quantities of goods being sold, there's a way of, I guess, of tracking the inventory.

Again, a contrast is clearly evident between the very *global* approximations reached by Nick, and the very *detailed*, accurate comprehension reported earlier by Helen. In the three preceding examples, Nick came to an overall sense of the meaning of each passage based in large part, it appears, on his logic and general knowledge. However, his general sense of the meaning was only accurate some of the time, as is clear again in the following excerpt:

*"Mais, comment votre machine peut-elle savoir si l'on met des vrais billets dans la caisse?"  
"Notre machine possède un analyseur de billets de banque unique au monde. Si un faux billet est présenté à nos caisses, une cage de fer sort du sol et entoure immédiatement le coupable, en attendant l'arrivée de la police."*

OK, so that's about false "billets", ticket, I think, being produced, by the person buying the goods, I'm not quite sure I understand what that is, a ticket if there's a magnetic stripe, but, if someone tries to produce a false "billet", a false ticket, then there's an inspector there to catch those people and to take immediate steps "de poursuivre", to follow them through the courts.

This preceding excerpt is interesting because, although Nick did not verbalize his linguistic processing and reasoning in detail, it is possible to reconstruct the steps in his reasoning, based on the interpretation errors in his comprehension. In earlier excerpts, Nick appeared to principally focus his attention on getting the gist of each segment. In so doing, he appeared, like Helen, able to resist being distracted by unfamiliar vocabulary, even though it is also clearly apparent that Nick's vocabulary base in French was not as wide as Helen's. In the case of the preceding excerpt however, Nick appears to have excessively focused on the word 'billet', which he wrongly interpreted as 'ticket' – only one among its many meanings

– rather than ‘bank note’. Nick had just previously understood correctly that the text had referred to instances when payment is made by cheque written with insufficient funds. But rather than continue to use his logic and general knowledge, and to connect the ‘faux billet’ (counterfeit bank note) to the earlier, on-going description of various modes of payment, Nick was not able to distance himself from his erroneous interpretation of ‘billet’, in spite of lingering doubts about the logic of this interpretation. The relative difficulty of the passage he had just heard for the first time, and the additional time Nick assigned to trying to guess a possible alternative meaning of ‘billet’ likely did not leave him sufficient time to simultaneously bring back the previous general context of the aural passage which could have helped him guess that the text was referring to instances of payment by counterfeit bank notes.

Retracing the steps in Nick’s reasoning leads to the conclusion that the metacognitive knowledge and, in particular, the strategy use which he was applying to the listening task were not sufficient to lead him to the same high level of detailed, accurate comprehension achieved by Helen. It appears that a weaker vocabulary base contributed in large part to Nick’s inability to reach a comparable level of accuracy and precision in comprehension. This weaker lexical base is indeed the factor which appears to have compelled Nick to – some of the time – focus excessively on certain ambiguous segments, and consequently reduced his attentional and reasoning capabilities (some of the time). The observation data, which space limitations regrettably do not allow the researcher to present here, strongly suggest also that Nick’s lexical knowledge was not as developed as that of the two other HP participants. In the questionnaire stimulated recall and interview sessions, Nick himself frequently commented on what he had also perceived as the lacunae in his lexical knowledge

when he explicitly compared it to that of his classmates. These lacunae are explainable by the fact that Nick had considerably less prior exposure to the French language than did his classmates (see Table 3.2).

Following are a few additional excerpts from Nick's report, this time, in the second listen to the first think-aloud text:

*“Monsieur, pouvez-vous essayer de me décrire la journée d'une de vos clientes?”*

OK, can you stop it right there, cause now, this time, yah, she's saying: “Can you describe to me the typical day of one of your clients?”

*J'arrive et je gare ma voiture?”*

*“Ha, non! C'est dépassé, tout ça! Vous arrivez à l'entrée du parking et vous descendez de votre voiture.*

OK, so, she, she parks the car, you get out of it, yah, and you get out of the car.

*Vous déposez alors l'argent dans un emplacement spécial. Soit la somme est exacte et une barrière s'ouvre, soit la machine vous rend la monnaie et vous libère.”*

OK, so, now, she's asking: “How have you resolved the way of paying?”, since, we saw that there's nobody in the store. You put your money in a special place, ‘emplacement’, ‘emplacement’, I think that's a special place. I think he's talking about two ways of paying for the merchandise. Um. Um. I don't know what ‘libre’ is here. Free, free. But how could the products be free? I assume that when one is paying with just the right amount of money, you are let to where one has to pay, but the other is by credit card, I assume. But that again is just intuition, cause I don't know. I think I'm getting used to the person who's speaking now, to the voice. And also, I've heard it now more than once and I'm getting used to the language, so, I'm picking it up easier now. I think the more I'd listen to it, the more I'd get.

*“Et si l'on paie par chèque?”*

*“Notre machine possède un analyseur de chèques qui est en relation permanente avec tous les ordinateurs des banques françaises.*

OK, that's pretty easy now, cause she's asking: “What if you wanna pay by cheque?” and he's saying: “Well, that's easy, we have a scanner for that, that um, that reads the cheque”, and it's very easy to accomplish that.

*Il nous est ainsi possible de savoir immédiatement si le chèque est approvisionné ou non. Si le chèque est sans provisions, la machine alerte aussitôt l'un des cinquante inspecteurs qui patrouillent dans le magasin.*

Yah, so, if it's a bum cheque, then one of the fifty, I think, cinquante, one of the fifty inspectors that, from the store, but wait a minute!: I thought there were no people in the store! (laughter) So, anyway, the machine alerts one of these inspectors and then the inspectors come in, perhaps.

Researcher: How did you understand 'bum cheques' ?

Nick: Oh, I just went by intuition.

These additional excerpts, from Nick's protocols in the second listen to the first think-aloud text, suggest that Nick was able to overcome his nervousness as he proceeded further into the listening. These additional excerpts also confirm our earlier observations concerning Nick's general approach to listening – including its strengths and weaknesses – and Nick's general level of processing and comprehension in L2 listening. Overall, Nick understood more of the aural text in the second listen. His report in the second listen illustrates once again a clear focus on getting a general sense of the meaning of each segment, by systematically drawing the meaning from all resources available to him, including not only his linguistic knowledge, but also his judgment of the general logic within each segment and general coherence among all segments in the text, his recollections of earlier parts of the text and earlier interpretations, and his general personal knowledge. Nick's report attests to constant monitoring, self-questioning and evaluation of comprehension, and is generally consistent with high metacognitive awareness, high self-regulation, and judicious strategy use from all points of view. Nevertheless, his manifestly less extensive vocabulary base also clearly appears to have been the principal reason why he was not able to reach as high a level of comprehension as was achieved by Helen.

It is interesting to point out that, unlike Helen, Nick did not take notes at any point during the think-aloud sessions. The observation data revealed that Nick also took no notes during the

first listen in the class exercises. In his interview, stimulated recall, and summative report data, Nick consistently stated that he had difficulty concentrating and sustaining attention while listening in French, and that taking notes during a first listen to a text, or during a think-aloud session, hindered his ability to concentrate. The observation and stimulated recall data revealed that Nick did, however, take notes *following* the first listen, as well as during and following the second and third class listens, and that he found note-taking to be useful at these particular times. In contrast, Helen and Ann, the two other participants in the HP group, took relatively extensive notes, both in the think-alouds and in the classroom exercises. Helen, in particular, explained on several occasions that she had a life-long general tendency to become distracted and forgetful, and that this note-taking was thus indispensable for her to be able to remember with detail what she had heard, even in cases when she had understood the aural message with no difficulty.

It should be noted also that, although space limitations do not allow the presentation of the data from Ann – the third participant in the high-proficiency group – her beginning-of-study think-aloud report revealed lexical knowledge in French, levels of metacognitive awareness, self-regulation, judiciousness in strategy use, and a level of comprehension which were very similar to those exhibited by Helen.

#### **4.2.2 Examples of metacognitive awareness, linguistic processing, and listening comprehension reported by the students in the low-proficiency group in the beginning-of-study think-alouds**

Whereas a single – longer – think-aloud task was used with the more advanced learners, two shorter think-aloud tasks were used in the low-proficiency group (see Appendix D). The first

listening task used in the LP group presented a generally lower level of difficulty. It referred to the annual tulip festival traditionally held in the capital region where the language training was provided. Hence, the context, most of the content, and many proper names from the passage could reasonably be expected to be familiar to the students. The text also contained many high-frequency words, and many words sharing close similarities with the students' native language, English. The second listening task presented a higher level of difficulty. It pertained to chess, a subject which would be less likely to be familiar to the students, and it included more complex content, more complex vocabulary, and a number of foreign proper names sharing no similarities with English or French, although these foreign names provided direct clues to the context.

As in the previous section, the presentation of the think-aloud data from the low-proficiency group focuses on examples from the two students who were most able to verbalize their linguistic processing with a level of detail.

#### **4.2.2.1 Excerpts from Emma's beginning-of-study think-aloud data**

It was judged that a few excerpts could suffice to illustrate the high-proficiency students' metacognitive awareness, self-regulation, strategy use, and comprehension at the beginning of the study, as just previously presented. However, in contrast to the high-proficiency students' protocols, the low-proficiency students' reports attest to variations in processing and comprehension in the execution of the think-aloud task. Therefore, the researcher judged that, in the case of the LP group, it was important that the reader be able to gain an appreciation of the students' complete sequence of cognitive processing and of the level of

listening comprehension achieved, based on at least some of their *unabridged* think-aloud reports.

Here is Emma's complete report of her comprehension in the first listen to the first think-aloud text:

*"... pour les nouvelles, dans quelques minutes, Francine Grimaldi... D'abord, vous êtes dans les tulipes, à Ottawa, toujours?"*

*"Toujours! Et bien, écoutez, j'écoutais Gilles, qui voyage en métro, Michel Coulombe, il voyage à bicyclette, vous le savez, et un fait à signaler à Michel Coulombe et à tous les mordus de la bicyclette : depuis ce matin, tous les dimanches matins, on ferme 65 kilomètres de rues, en plus des 170 kilomètres de pistes cyclables régulières, dans les villes de Gatineau (ex-Hull) et Ottawa.*

OK, well, um, it's a conversation between two people. He's talking about his bicycle trip, and, um, he's talking about the distance between, um, his trip in to Ottawa, and um, in the area, um, he's speaking about Hull, and um, all the mornings, I believe he said all the mornings, I think he, I think this was something he did every morning.

*A Ottawa, c'est le Parkway : c'est, c'est fermé jusqu'à 13 heures. On peut se promener à pied ou à bicyclette ou en patins, enfin, c'est vraiment merveilleux, c'est, c'est charmant. Je pense que c'est un exemple que l'on pourrait peut-être suivre le dimanche à Montréal aussi."*

OK, he said the parkway was closed, this morning, and um, um, I think he said something about going to Montreal, but um, something about bicycles, and um, I think he was talking about, um, because the parkway is closed this morning, possibly something that happened with his bicycle was affecting, and he gave some other information, too, but I didn't catch it.

*"Et bien oui!"*

*"Et bien, il y a, dans le cadre du festival canadien des tulipes, une série de concerts d'artistes Canadiens, tous les soirs, jusqu'au 24 mai, dans le parc derrière le Château Laurier où je suis, là.*

OK, 'talking about the tulip festival and all the, um, artists, and that they're found behind the, um, the um, Chateau Laurier, I think he said.

*Heu, il y a..., hier, c'était les groupes Tangiers, Manpower, le groupe punk gagnant d'un Juno, Billy Talent, très attendu hier... Les jeunes, les jeunes s'installent dès le matin, hein, pour, toute la journée, attendre le show du soir. Et ce soir, aujourd'hui... ce matin, je n'ai pas regardé dans le parc, mais il y a Audrey de Montigny qui va chanter, à 21h30, ce soir, la star chérie de Canadian Idol..."*

*"D'accord."*

*"... alors, je suis sûr qu'il y aura encore foule ce soir aussi.*

OK, um, um, I, I was, um, my mind, um, had one thought and then it, I, would drift away and just miss another one, but um, I think he was talking about the musicians, a group of musicians that were, um, different types, he was talking, as an example, there was gonna be a lot happening, sort of what was going on, and he's talking about the Canadian Idol of course, um, and um, basically, he's talking

about a music festival and that type of thing.

*Et, à part ça, il y avait, à Ottawa, il y a, il y a de tout, hein, il n'y a quand même pas que des tulipes! Et heu... il y a Jean-Pierre Perreault, à qui on rend hommage... ”*

*“Ha oui!”*

*“... jusqu'au 12 juin... ”*

*“... le chorégraphe!”*

*“Oui, le chorégraphe, le regretté chorégraphe Jean-Pierre Perreault. On a repris Joe, hier soir, comme on l'avait fait à la place des Arts, sa magnifique chorégraphie, un chef-d'oeuvre. Mais à voir aussi, jusqu'au 12 juin : une exposition au Centre national des arts qui couvre toute la vie... ”*

*“D'accord!”*

*“... et l'oeuvre de Perreault : des photos, des affiches, des maquettes, des esquisses, toutes sortes.... Vraiment, à voir... ”*

*“Merci! Richard, au tennis...?”*

OK, he's talking about, in front of the Arts Center, there's a “caragraphe”, I'm thinking that means caricature, drawings, um, and there's a man's name, and um, he was telling you the directions for how to get there, to where he is, um, that sort of thing.

Following is Emma's complete report of her comprehension in her second listen to this first think-aloud text, when, this time, she was free to interrupt the tape whenever she wished to add to her first report:

*“... pour les nouvelles, dans quelques minutes, Francine Grimaldi... D'abord, vous êtes dans les tulipes, à Ottawa, toujours?”*

*“Toujours! Et bien, écoutez, j'écoutais Gilles, qui voyage en métro, Michel Coulombe, il voyage à bicyclette, vous le savez,*

OK, OK, he's talking about, um, this is the news, and he's talking about um, um, how the trip in, um, I believe, in to um, um, in to the metro, in to the downtown, and um, he's talking um, um, he's coming in by bicycle or something like that. I'm po..., I had it and I lost it, I'm sorry.

Researcher: No problem!

*et un fait à signaler à Michel Coulombe et à tous les mordus de la bicyclette : depuis ce matin, tous les dimanches matins, on ferme 65 kilomètres de rues, en plus des 170 kilomètres de pistes cyclables régulières, dans les villes de Gatineau (ex-Hull)*

OK, sixty-five kilometers, the route, and um, he, start in Hull, um, Gatineau, pardon, not Hull, Gatineau, and um, um, I think he's talking about his trip like on a bike. His trip in to Ottawa. OK.

*et Ottawa. A Ottawa, c'est le Parkway : c'est, c'est fermé jusqu'à 13 heures. On peut se promener à pied*

OK, OK, then he gets in to Ottawa at the parkway, just up to, um, twelve, um, a distance, um, um, I think it was closed, but, um, I'm not sure there.

*ou à bicyclette ou en patins, enfin, c'est vraiment merveilleux, c'est, c'est charmant. Je pense que c'est un exemple que l'on pourrait peut-être suivre le dimanche à Montréal aussi.*

*"Et bien oui!"*

OK, um, um, he says "great!", um, and, something about, um, I think it's a good way to go to Montreal or, in that direction. OK.

*"Et bien, il y a, dans le cadre du festival canadien des tulipes, une série de concerts*

The Canadian, um, the, this um, this Canadian festival, um, the tulip festival.

*d'artistes Canadiens, tous les soirs, jusqu'au 24 mai, dans le parc derrière le Château Laurier où je suis, là.*

OK, to go there you go "juste" um, just um, I think he said "vingt-quatre kilomètres" behind the Chateau Laurier. That can't be right. It isn't there. (sigh). Just, um, OK.

*Heu, il y a..., hier, c'était les groupes Tangiers, Manpower,*

Yesterday there was a group Tangiers.

*le groupe punk gagnant d'un Juno, Billy Talent, très attendu hier... Les jeunes, les jeunes*

They won, they won, I think, a talent show, or they're very talented. They won something though. "Juno", they won a Juno, and they had, they had a lot of talent.

*s'installent dès le matin, hein, pour, toute la journée, attendre le show du soir. Et ce soir, aujourd'hui... ce matin, je n'ai pas regardé*

All the days and nights.

*dans le parc, mais il y a Audrey de Montigny qui va chanter, à 21h30, ce soir, la star chérie de Canadian Idol..."*

*"D'accord."*

*"... alors, je suis sûr qu'il y aura encore foule ce soir aussi.*

Their idol, Canadian Idol, I think they're talking about their 'chérie', it's like a dear person. I'm not sure.

*Et, à part ça, il y avait, à Ottawa, il y a, il y a*

In Ottawa. Au passé (reference to past tense of sentence).

*de tout, hein, il n'y a quand même pas que des tulipes!*

Tulip park.

*Et heu... il y a Jean-Pierre Perreault, à qui on rend hommage..."*

*"Ha oui!"*

*"... jusqu'au 12 juin..."*

*"... le chorégraphe!"*

Um, just up to, um, twelve, um, I don't know what the word ... (unfinished sentence).

*Oui, le chorégraphe, le regretté chorégraphe Jean-Pierre Perreault.*

Oh! OK, it's choreographed by Jean Perreault.

*On a repris Joe, hier soir, comme on l'avait fait à la place des Arts, sa magnifique chorégraphie, un chef-d'oeuvre.*

Um, something's marvelous at the Place des Arts.

*Mais à voir aussi, jusqu'au 12 juin :*

Oh!, OK, also, 'juin', um, OK, um, twelfth of July, um, there is an exhibit, or, um, there is something, happening, the twelfth of July.

*une exposition au Centre national des arts qui couvre toute la vie... "*

*"D'accord!"*

*"... et l'oeuvre de Perreault : des photos, des affiches, des maquettes, des esquisses, toutes sortes..... Vraiment, à voir... "*

*"Merci! Richard, au tennis...?"*

OK, there's a bunch of things happening, "les photos", he gave a bunch of things that will be happening in this festival.

Researcher: Sorry, at what festival?

Emma: Well, um, um, well, um, it has to do with, um, with, um, the tulip festival, he's talking in general about all the things that are taking place there.

Researcher: Oh, O.K., thanks. Um, could I ask you to briefly recap, summarize, what you heard for me?

Emma: Well, it's an interview in the morning in the news, or in the morning, and he's talking about um, I believe, um, his trip in, now I'm not certain if he's coming in by bike, but, that was, my first assumption, and he's talking about starting in Gatineau and the distance that he has to come in to centre-ville and he takes the parkway, towards, I believe now, but I'm thinking about it, um, something towards about Montreal, anyway, um, then he's talking about, in Ottawa, um, he gives a time frame, there's a tulip festival, and it's marvelous, and it's got, um, musicians, or music is happening, people like American Idol, um, also, he's talked about somebody choreographed the display, um, and, um, um, he mentions a few times when it's taking place, and he mentions the dates it's up until, and um, I think it's basically a description of the activities that are gonna be taking place.

Researcher: O.K., thank you.

The examination of Emma's data reveals a very poor, highly fragmented comprehension, and very poor metacognitive awareness, self-regulation, and strategy use being applied in the linguistic processing of the think-aloud listening task.

Based on her comprehension of only a few, isolated, high-frequency words, and of a few words sharing close similarities with her native language or regularly heard in her daily life in English (principally: bicyclette, Ottawa, Hull, parkway, tulipes, festival, matins, métro, concerts, artistes, kilomètres, fermé and chorégraphe), Emma attempted to come to an understanding of the text almost exclusively by process of elaboration from her literal translation of these few words.

However, her think-aloud report indicates that Emma was overwhelmed by the rapid flow of chiefly unfamiliar words, and that the level of attention which she devoted to trying to distinguish and make sense of the vocabulary left her no time to verify any of her elaborations against the general context which, yet, she had correctly understood. The attention this student devoted to the comprehension of the vocabulary in fact 'single-tracked' her focus of reasoning to the extent that she largely failed to bring even the general knowledge of the context that she possessed, or her sense of logic, to the aid of her comprehension.

Although she was able to understand a few more details in the second listen and to confirm the general context of the passage, Emma continued to conduct her linguistic processing with a very selective focus on individual words, and she proceeded to immediately build – mostly erroneous – elaborations based on her unverified comprehension of scattered segments of

text. Her constant analyses of the vocabulary and constant formulation of elaborations placed such demands on her concentration that, at times, Emma appeared to have forgotten even what the general context of the passage was, and her reports became shorter and shorter, less and less coherent, independent fragments of comprehension (such as: “In Ottawa. Au passé.”, “Tulip park.”, or “Um, just up to, um, twelve, um, I don’t know what the word ...”).

Her think-aloud data clearly indicates that three interrelated factors were the principal sources of the problems encountered by this student in the listening task. First, this student’s knowledge of the French lexicon was impoverished to the degree that she did not have mastery of even the names of the months (e.g.: failure to recognize *mai*, interpretation of *juin* as July), or numbers in French (e.g.: *13 heures* interpreted as twelve). Second, this student frequently misheard sounds or individual letters in French (e.g.: *jusqu’* first perceived as *juste*, *chorégraphe* first perceived as ‘**car**apraphe’). Third, the student failed to take the initiative to compensate for her shaky vocabulary foundations by applying appropriate listening strategies to the listening task (weaknesses in lexical knowledge, in phonological skills, in self-regulation, and consequently, in strategy use).

In the other listening task utilized in the first think-aloud, the source of Emma’s comprehension difficulties, her approach to the task, and her level of overall comprehension were similar, albeit for one interesting difference: Emma made a more extensive use of comprehension evaluation. Here are random excerpts from her report in the first listen to the second task:

*Il y aura une soirée d’ouverture au Cégep du Vieux-Montréal samedi le 17 juillet, de 19h à 21h30.*

*Ce sera une belle opportunité de rencontrer les grands maîtres invités, et de venir entendre et discuter des toutes dernières nouvelles du monde des échecs.*

OK, OK, so, um, it's something about speaking to, um, to the 'grand-mère', et aussi, um, they're gonna have an occasion, um, I guess an encounter actually, a meeting with um, and, um, OK. What I'm doing is I'm hearing things, and then, I'm making assumptions and then I'm forgetting them very quickly, but anyway, I may change my mind on, on what I said.

As in the previous text, Emma's report attests to difficulties remaining focused on the establishment of a general framework, and difficulties remembering her successive hypotheses, most likely as a result of the disconcertingly rapid flow of largely unknown words. As in the previous text, Emma is also mishearing French words. In this case, she misheard 'grand-mère' (grand-mother) for 'grand maître' (grand master). Consistent also with our earlier observations, Emma is deriving comprehension principally from high-frequency words or from terms which share close similarities with English counterparts (in this case: venir entendre, discuter, and opportunité).

*Nous profiterons de l'occasion pour honorer les joueurs du Québec qui ont atteint de nouveaux sommets durant la dernière année.*

OK, um, you'll profit very, um, very much, or, um, it's worth the time to something, it's in Quebec, and um, and (repeats parts of French segment to herself in a very low voice), um, OK, I lost it.

*Il a été impliqué dans un match de championnat du monde - avec Anatoli Karpov - qui a attiré l'attention des médias par ses nombreux rebondissements. Le match de championnat du monde de 1978, à Baguio, aux Philippines, mérite pleinement sa réputation de championnat du monde le plus bizarre à avoir été joué.*

(short pause marked by the respondent for thinking in silence). Um, what's happening right now is that I hear it, and I go: that's what it means, and then, I continue hearing, concentrating, and I lose my thought completely. I'm just automatically forgetting. Going: that's what it means, and then, forgetting.

*Il y eut également beaucoup de controverse à l'échiquier et des demandes assez farfelues : passer aux rayons X les chaises, protestations concernant les drapeaux utilisés et d'inévitables plaintes d'hypnotisme, accusant jusqu'aux lunettes de Korchnoi, qui utilisait des verres dont un côté était des miroirs.*

OK, there's lots of, um, (pause, sigh), oh, I'm just losing everything, um, (sigh), OK, there's lots of, there's lots of controversy I believe, discussion, concerning um, um. You know what? I'm hearing it

and I'm just losing it. I'm going: 'yah!', and then, I'm just losing it.

Here are excerpts from Emma's report in the second listen to this same text, where she was free to interrupt the tape whenever she wished to add to her earlier report:

*de 19h à 21h30.*

OK, it tells me the time now: 'neuf heures à vingt heures trente'.

Again, Emma either misheard the French words, mistranslated the numbers, or failed to accurately remember the numbers stated, repeating 9:00 to 20:30, instead of 19:00 to 21:30.

*Ce sera une belle opportunité de rencontrer les grands maîtres invités,*

OK, it's a good opportunity to meet, um, I think it's 'grand-mère'! (laugh). Grand-mother (laugh)! It's either that or (laugh). OK, an assumption. OK. I don't know. I'm thinking it's more like the head person, like the, um, the, the historic person he's talking about, or something like that. I might be really wrong (laugh).

Although Emma's comprehension in this second text is as fragmentary as in the first listening task, a noteworthy difference, here, is that common sense is prompting her to seriously doubt the probability that she accurately perceived the word 'grand-mère' in the French text. As a result, rather than immediately jump to an interpretation, she is exercising some caution and appears to be searching for alternative explanations based on what she heard earlier. It is interesting also to note the number of times that Emma's reports were punctuated by laughter at her own linguistic processing difficulties. This good humor suggests strong abilities to sustain self-confidence and to resist discouragement in the face of difficulty in L2 listening. These observations are perfectly consistent with the self-confidence and determination which this student described in the questionnaire stimulated

recall sessions, and which was observed in the classroom.

*et de venir entendre et discuter des toutes dernières nouvelles du monde des échecs.*

OK, and a good time to discuss the, the new, the news, the, a, each division or um, 'checs' (pronounced in lower voice). OK.

*Nous profiterons de l'occasion*

We're gonna profit from this occasion to. We. Us. We.

Once again, similarly to what we observed in her second listen to the earlier text, toward the end of the task, Emma appeared less and less able to sustain the attentional demands of the linguistic processing; she processed the tape by shorter segments, and erring from word to word, her reports became less and less coherent, independent fragments of comprehension.

*Le coût du billet est de 10 \$ (si payé à l'avance) ou de 20 dollars le 17 juillet à la porte*

OK, it's gonna cost, um, you could, um, pay two dollars, in advance. Or, twenty dollars, it gives me a date in July, in July, at the door.

Even the comprehension of the easiest segments led to misinterpretations due to mishearing (in this case: confusion of the sounds 'deux' and 'dix') which went unnoticed as a result of insufficient evaluations of interpretations based on common sense.

*participera au cup 2004. Korchnoi a eu une vie assez colorée. Il a fait défection de l'Union soviétique*

Something he did, 'fin-affection', or 'fait-effection', affection?, I don't think so. I know the words, but I'm having trouble with the context, 'cause I know it's not the grand-mother (laugh), I know it's a federation, and I know that's a key I'm missing, so I'm trying, I'm trying to get a good feel for what's going on.

This excerpt again attests to the noteworthy difference that, in this second task, Emma proceeded to more evaluations of her comprehension, and continued to try to build a

contextual framework throughout her listening, rather than jump to immediate unverified interpretations as she did in the first task. However, it appears that Emma was not able to apply this approach systematically, in part because her perceptual difficulties greatly hindered this process.

*Le match de championnat du monde de 1978, à Baguio, aux Philippines,*

OK, that was the winner, this guy, 'Philippe' whatever his name was, the champion of, um, of the 'monde' (pronounced half-way between 'monde' and 'mount'), the mountains. The mountains? No, can't be. OK.

*mérite pleinement sa réputation de championnat du monde le plus bizarre à avoir été joué.*

Oh! The world! Champion of the world! Sorry. Yah! (laugh).

*Dans un jeu comme les échecs, où la jeunesse prime, Korchnoi, qui a eu 73 ans en mars, continue de jouer et de se maintenir au sommet.*

OK, so, um, in March, they're talking about a date, we're gonna continue to play I think. I guess I'm really not getting a lot of this.

Researcher (immediately following the end of the second listen): Can you tell me, like you did for the first passage, can you summarize what you understood for me?

Emma: OK, I think it's a Quebecois, it's a federation um having to do with like, like I say, Quebecois, some kind of federation or association meeting in general is taking place, I think it was taking place in um, yah, um, what was it now?, um, yah, in Quebec, and um, it was, they were talking basically about what they accomplished, in the news, um, in the old news, um, the agenda, um, basically, that's what the, what they, the business of the federation, and um, I think they spoke about one particular person, which was, um, the person they looked up to, and um, and that had had obviously a big, big impact on that organization and um, I think they talked about how, um, what they want to, um, achieve, possibly, and also, um, I think in the end they talk about, either taking that material and, you know, having it on a national level, either next year or at some point, um, I think (laugh).

Researcher: O.K. Thank you very much.

Again, the data point to a very sketchy, disorganized comprehension, with the grasp of only a few peripheral details and nuances. In this second task, this very poor level of comprehension results principally from a complete failure to grasp the main subject

(‘échecs’) even though it was repeatedly mentioned throughout the passage, along with multiple repetitions of ‘Anatoli Karpov’ and ‘Viktor Korchnoi’.

#### 4.2.2.2 Excerpts from John’s beginning-of-study think-aloud data

As in the preceding case, the researcher judged that it was important, for the understanding of the data, that the reader be able to gain an appreciation of the student’s complete sequence of cognitive processing, and of the level of listening comprehension achieved, based on the learner’s unabridged think-aloud reports. We thus begin this analysis of John’s data with an examination of his complete think-aloud report in the first listening task pertaining to the annual Ottawa tulip festival.

*“... pour les nouvelles, dans quelques minutes, Francine Grimaldi... D’abord, vous êtes dans les tulipes, à Ottawa, toujours?”*

*“Toujours! Et bien, écoutez, j’écoutais Gilles, qui voyage en métro, Michel Coulombe, il voyage à bicyclette, vous le savez, et un fait à signaler à Michel Coulombe et à tous les mordus de la bicyclette : depuis ce matin, tous les dimanches matins, on ferme 65 kilomètres de rues, en plus des 170 kilomètres de pistes cyclables régulières, dans les villes de Gatineau (ex-Hull) et Ottawa.*

Um, something about people riding a bicycle, the amount of distance traveled, at the very beginning of it, there’s something the ‘nouvelles’, and the news about the tulip, and or um. But it’s something about a bicycle ride, around Ottawa, Gatineau, and the amount of distance.

*A Ottawa, c’est le Parkway : c’est, c’est fermé jusqu’à 13 heures. On peut se promener à pied ou à bicyclette ou en patins, enfin, c’est vraiment merveilleux, c’est, c’est charmant. Je pense que c’est un exemple que l’on pourrait peut-être suivre le dimanche à Montréal aussi.”*

Um, something about the park being closed, um, at one o’clock, um, I didn’t get much else. OK.

*“Et bien oui!”*

*“Et bien, il y a, dans le cadre du festival canadien des tulipes, une série de concerts d’artistes Canadiens, tous les soirs, jusqu’au 24 mai, dans le parc derrière le Château Laurier où je suis, là.*

OK, every evening through the festival for the tulips, there’s entertainment in the park, there’s entertainers in the park every evening. Um, I recognized the words for, um, entertainers, in the park, ‘soirs’, every evening, so, I’m picking up words, and thinking about the context in which he’s in.

*Heu, il y a..., hier, c'était les groupes Tangiers, Manpower, le groupe punk gagnant d'un Juno, Billy Talent, très attendu hier... Les jeunes, les jeunes s'installent dès le matin, hein, pour, toute la journée, attendre le show du soir. Et ce soir, aujourd'hui... ce matin, je n'ai pas regardé dans le parc, mais il y a Audrey de Montigny qui va chanter, à 21h30, ce soir, la star chérie de Canadian Idol... "*  
*"D'accord."*

*"... alors, je suis sûr qu'il y aura encore foule ce soir aussi."*

OK, I think he said there's a lot of people in the park, a lot of young people in the park, he named some of, the particular groups that were there, um, I think he said this evening, or one of the evenings that the, person from, um, Canadian Idol was gonna be on hand.

*Et, à part ça, il y avait, à Ottawa, il y a, il y a de tout, hein, il n'y a quand même pas que des tulipes! Et heu... il y a Jean-Pierre Perreault, à qui on rend hommage..."*

*"Ha oui!"*

*"... jusqu'au 12 juin..."*

*"... le chorégraphe!"*

*"Oui, le chorégraphe, le regretté chorégraphe Jean-Pierre Perreault. On a repris Joe, hier soir, comme on l'avait fait à la place des Arts, sa magnifique chorégraphie, un chef-d'oeuvre. Mais à voir aussi, jusqu'au 12 juin : une exposition au Centre national des arts qui couvre toute la vie..."*

*"D'accord!"*

*"... et l'oeuvre de Perreault : des photos, des affiches, des maquettes, des esquisses, toutes sortes..... Vraiment, à voir..."*

*"Merci! Richard, au tennis...?"*

I didn't get a lot of that. Um, something about a gentleman, he gave him name, Pierre, anyway, he was a, choreographer, for, um, a show that's gonna be at the Art Center, that's all I got.

It is clear, from John's think-aloud, that his approach to linguistic processing differs from Emma's along several fundamental dimensions. First, his report contains no evidence of misperception of words such as that found in Emma's report. Second, it is clear that John directed his efforts and attention toward extracting the main idea or essential content within each segment, in contrast to Emma's tendency to only take short leaps from one word to the next. Third, John displayed an ability to correctly weigh the relative degree of relevance of the various details provided in the French text. Fourth, this student exhibited an ability to process and to retain these details in an efficiently summarized mental form. For example, rather than waste attention and time converting higher numbers such as 'soixante-cinq' (65) or 'cent soixante-dix' (170) into their English equivalents as Emma attempted to – a typically difficult and time-consuming process for beginning language learners – John more efficiently

retained the sufficient concept that, in his words, ‘an amount of distance’ was given. Moreover, John monitored and evaluated his comprehension against his general knowledge and logic. As a direct result of these crucial differences in the approach to the listening, and in the absence of any evident perceptual handicap, John’s comprehension of this text, although far from complete, attests to consistent coherence and cohesiveness in interpretation. For the most part, John’s comprehension, although minimal, was accurate. Interestingly yet, there is no evidence in this student’s report to suggest that his lexical knowledge was appreciatively greater than that suggested by Emma’s report. John’s *accurate* albeit limited comprehension appears to result from higher metacognitive awareness than was evident in Emma’s protocols, and from the application of self-regulation and judicious strategy use in the execution of the listening task.

Following is John’s complete report in the second listen to the first listening task:

*“... pour les nouvelles, dans quelques minutes, Francine Grimaldi... D’abord, vous êtes dans les tulipes, à Ottawa, toujours?”*

*“Toujours! Et bien, écoutez, j’écoutais Gilles, qui voyage en métro, Michel Coulombe, il voyage à bicyclette, vous le savez, et un fait à signaler à Michel Coulombe et à tous les mordus de la bicyclette : depuis ce matin,*

OK, um, so there’s someone who took a trip on a bicycle, I think he said it was around Ottawa, and something to do with the tulips. The first part of that was saying that the news was coming up in a little while, I don’t think it had anything to do with the story that we’re listening to now, or the news, that we’re listening to now. OK.

As was frequently the case with the other students whose reports were previously examined, John was able to add more precision and to pick up sharper nuances in the second listen.

*tous les dimanches matins, on ferme 65 kilomètres de rues, en plus des 170 kilomètres de pistes cyclables régulières, dans les villes de Gatineau (ex-Hull) et Ottawa. A Ottawa, c’est le Parkway :*

*c'est, c'est fermé jusqu'à 13 heures. On peut se promener à pied ou à bicyclette ou en patins, enfin, c'est vraiment merveilleux, c'est, c'est charmant. Je pense que c'est un exemple que l'on pourrait peut-être suivre le dimanche à Montréal aussi.*

*"Et bien oui!"*

*"Et bien, il y a, dans le cadre du festival canadien des tulipes, une série de concerts d'artistes Canadiens, tous les soirs, jusqu'au 24 mai,*

OK, um, throughout the evenings during the tulip festival, there's a, um, there will be, um, Canadian entertainers every evening. OK.

Again, this student's focus is clearly on the identification of the general sense and main idea within each segment.

*dans le parc derrière le Château Laurier où je suis, là.*

That's, in the park behind the Chateau Laurier, Major's Hill Park. OK.

'Major's Hill Park' was in fact not explicitly mentioned in the French text. It is, however, the precise name of the park where the events described take place each year. This detail in John's report suggests that he was drawing from his background knowledge of the festival to assist his comprehension.

*Heu, il y a..., hier, c'était les groupes Tangiers, Manpower, le groupe punk gagnant d'un Juno, Billy Talent, très attendu hier... Les jeunes, les jeunes s'installent dès le matin, hein, pour, toute la journée, attendre le show du soir. Et ce soir, aujourd'hui... ce matin, je n'ai pas regardé dans le parc, mais il y a Audrey de Montigny qui va chanter, à 21h30, ce soir, la star chérie de Canadian Idol..."*

*"D'accord."*

*"... alors, je suis sûr qu'il y aura encore foule ce soir aussi. Et, à part ça, il y avait, à Ottawa, il y a, il y a de tout, hein, il n'y a quand même pas que des tulipes! Et heu... il y a Jean-Pierre Perreault, à qui on rend hommage..."*

*"Ha oui!"*

*"... jusqu'au 12 juin..."*

*"... le chorégraphe!"*

*"Oui, le chorégraphe, le regretté chorégraphe Jean-Pierre Perreault."*

Yes, 'chorégraphe' is, the word he used, that's what I got earlier. Good. OK, um, the show they're talking about is on the second of June I think, that's what I heard. OK.

John's report reveals that he double-checked the accuracy of his comprehension from the

point of view of auditory discrimination (contrasting and confirming, for example, his perception of ‘chorégraphe’). Nevertheless, it does also reveal, in this instance, problems similar to those observed in Emma’s report, in the perception or in the transfer of some numbers: ‘douze’ (12) interpreted as second, possible perceptual confusion between **douze** and **deux** (2).

*On a repris Joe, hier soir, comme on l’avait fait à la place des Arts, sa magnifique chorégraphie, un chef-d’oeuvre. Mais à voir aussi, jusqu’au 12 juin : une exposition au Centre national*

‘Douze, juin’, so, it’s the twelfth of June. OK.

Interestingly, John became aware of his error in the transfer or perception of the number 12 in the following segment, and he accurately corrected his interpretation. This again points to a continuous process of monitoring and evaluation of *prior* as well as *on-going* interpretations.

*des arts qui couvre toute la vie... ”*

*“D’accord!”*

*“... et l’oeuvre de Perreault : des photos, des affiches, des maquettes, des esquisses, toutes sortes..... Vraiment, à voir... ”*

*“Merci! Richard, au tennis...?”*

Researcher: O.K., um, could you please, just recap what you heard for me?

John: OK, I think the news, one announcer on the news is coming up, this is another one who may be in the field or, outside the studio, and he’s telling about what’s going on in the tulip festival, about, um, I think he’s talked about someone taking a, bike ride, around some of, the parks and trails, in Ottawa, and Gatineau and Hull, ex-Hull, um, he talked about what was going on at the tulip festival, even some of the groups that were going to perform, Canadian groups, and, um, he said it was, um, well attended by the young people, um, punk rock and other things he mentioned, and then he went on to mention something about this, choreographer, who’s staging a show or something at the Arts Center on the twelfth of June, and, um, that’s it.

Researcher: O.K. Thank you very much.

John's immediately retrospective summary of his understanding further confirms that, although minimal like Emma's, his comprehension was largely accurate, unlike Emma's.

We conclude this analysis of low-proficiency students' beginning-of-study think-alouds with an examination of John's concurrent reports in the execution of the second listening task, pertaining to chess. Here is John's complete report in the first listen to this second text:

*La Fédération québécoise des échecs, l'Association échecs et maths et le Festival juste pour jouer vous invitent au championnat ouvert d'échecs du Québec, du 17 au 24 juillet, au Cégep du Vieux-Montréal, 255, Ontario Est, Montréal.*

OK, um, I didn't get a lot of this, he's talking about 'champion' in Quebec, kind, um, I would assume it's some sport, and, speaking in this context, he gave a date, for when it was going to happen there, but I'm not sure when it was. OK.

Consistent with his approach in the previous listening task, John's report illustrates that, from the opening lines of the text, this student attempted to identify the key words which could lead him to the identification of a guiding context.

*Il y aura une soirée d'ouverture au Cégep du Vieux-Montréal samedi le 17 juillet, de 19h à 21h30. Ce sera une belle opportunité de rencontrer les grands maîtres invités, et de venir entendre et discuter des toutes dernières nouvelles du monde des échecs.*

OK, there's gonna be an opportunity, or there's gonna be a 'soirée', um, some time in June, it's gonna be an opportunity to meet, and to listen to, whoever this individual they were talking about. I think. Again, picking up words in the sentences, um, 'opportunité', 'rencontre', um, 'écoute', um, just picking up some of the words and taking them independently fitting them in, um, he gave me a date in the context, so, it gives me an idea something's gonna happen at that time, and it gets me thinking about, what's (pronounced with emphasis), going to happen, and then he says there's an opportunity to meet um 'rencontre' and listen. OK.

Two important observations in particular can be made here. First, John's interpretation of 'juillet' (July) as June offers further evidence that, like Emma, this student had likely not yet mastered the automatic recognition and conversion of even fundamental dates and numbers

in French. Second, John's report offers further corroborating evidence that, like Emma's, his lexical knowledge in French was likely very limited. Indeed, as did Emma, John principally reported guiding himself through the comprehension of the text based on the understanding of a very few high-frequency words and of a very few words sharing close similarities with their English counterparts ('opportunité', 'rencontre', 'venir entendre').

*Nous profiterons de l'occasion pour honorer les joueurs du Québec qui ont atteint de nouveaux sommets durant la dernière année.*

An 'occasion', an occasion, to take the opportunity, um, I listened to this, to an 'occasion', and I kind of missed what was said after that. OK.

Whereas, in the first text, John did not appear as distracted as was Emma by the rapid flow of largely unfamiliar words, in this second task, difficulties sustaining attention are beginning to manifest themselves. In this case, John attributed his attentional difficulties to an excessive focus on the processing of an individual word.

*Le coût du billet est de 10 \$ (si payé à l'avance) ou de 20 dollars le 17 juillet à la porte (sandwiches et breuvages inclus).*

The ticket is twenty, um, I think twenty dollars if you pay at the door, I think it's a little less than that if you purchase before, and, sandwich and beverage is included.

In this segment, John reached a high degree of accurate comprehension. However, such was not to be the case in any of the following segments.

*De plus, le grand maître Viktor Korchnoi participera au cup 2004. Korchnoi a eu une vie assez colorée. Il a fait défection de l'Union soviétique en 1976 et, par la suite, les Russes omettaient sciemment de mentionner son nom, même s'il gagnait un tournoi majeur. C'était comme s'il n'était plus de ce monde.*

I didn't get much of that (sigh), um, I'm not sure (*sure* pronounced with emphasis), I think he mentioned something about um, something to do with psychology, or, psychologists, or, um, I don' know.

*Il a été impliqué dans un match de championnat du monde - avec Anatoli Karpov - qui a attiré l'attention des médias par ses nombreux rebondissements. Le match de championnat du monde de 1978, à Baguio, aux Philippines, mérite pleinement sa réputation de championnat du monde le plus bizarre à avoir été joué.*

Well, again, they're talking about this champion of the world, I'm not quite sure what the sport is, um, they're talking about, um, I think, there was a man done in ('done in' ? unclear in recording) by the media, um, I think he had many advers..., advertisements, or something of that kind in there.

*L'équipe de Karpov comprenait le docteur Zukhar, un hypnotiseur bien connu, alors que Korchnoi prend dans son équipe un personnage louche qui subissait un procès pour meurtre.*

I didn't get any of this. 'Persecute pour meurtre', something, I don't know, I don't know, I'm not quite sure.

*Il y eut également beaucoup de controverse à l'échiquier et des demandes assez farfelues : passer aux rayons X les chaises, protestations concernant les drapeaux utilisés et d'inévitables plaintes d'hypnotisme, accusant jusqu'aux lunettes de Korchnoi, qui utilisait des verres dont un côté était des miroirs.*

Um, there was some sort of a demonstration against the flag that was used, um, for what reason, I don't know.

*Mais quand l'équipe de Karpov lui a envoyé un yogourt aux bleuets pendant une partie sans qu'il en ait fait la demande, l'équipe de Korchnoi a vivement protesté, prétendant qu'il s'agissait certainement d'un message codé.*

No, the only thing I understand is that it's about a game, and they again mentioned the demonstration and something about the message.

*Dans un jeu comme les échecs, où la jeunesse prime, Korchnoi, qui a eu 73 ans en mars, continue de jouer et de se maintenir au sommet. Comme le disait le maître Éric Beaulieu récemment, monsieur Korchnoi est un monument échiquéen sur la scène mondiale et il est un symbole de détermination et de conservation des fonctions cognitives.*

Something about a 'prime' or a bonus was used in the first part of that conversation, they were talking about a gentleman, he was I think a model of determination, for, I think the world.

*Cette année, les or..., les organisateurs ont mis le paquet afin que, plus que jamais, cette fête échiquéenne soit un grand succès. On ne ménage pas nos efforts afin que les joueurs d'échecs du Québec soient fiers de leur grande rencontre nationale.*

This year, the organizer for this, whatever it is (laugh), thinks it may be, a great success, I think that's what they said.

Researcher: O.K. Thank you. Anything you'd like to add before the second listen?

John: I think I've picked up some of the words, um, I'd like to find out what sport this guy is in, so, you know, 'champion du monde', I got that part, I won't listen to that as intensively, but it may be a trigger whenever I wanna hear what's coming next really closely. Or I'll try to start listening really attentively

waiting for that phrase to come in, to see what's before, um, you understand?, I'll try to disregard the problem, the word I don't know, and try to focus on the words that come in just before, or just after. That will be the logic, whether it will work will be another story (sigh).

Although, like Emma's, John's comprehension in the second listening task remained extremely fragmentary due to his inability to grasp the topic uniting all segments, he explained a plan to try to identify the contextually central keyword ('échecs': chess) which he was aware of not having understood in the first listen, further example of this student's metacognitive awareness, self-regulation, and of his knowledge of a variety of strategic problem-solving approaches in L2 listening. Emma's report contained no evidence of any such organized plan: no systematic monitoring, evaluation or revision of her approach to the task or of her focus of attention during the task were apparent in her think-aloud data.

Following is John's complete think-aloud report in his second listen to the text pertaining to chess:

*La Fédération québécoise des échecs, l'Association échecs et maths et le Festival juste pour jouer vous invitent au championnat ouvert d'échecs du Québec, du 17 au 24 juillet,*

OK, there's a group of people, there's a federation in Quebec, they're talking about this organization. Um, I think they are saying they've invited this champion, but what he's gonna do, I didn't understand.

*au Cégep du Vieux-Montréal, 255, Ontario Est, Montréal. Il y aura une soirée d'ouverture au Cégep du Vieux-Montréal samedi le 17 juillet, de 19h à 21h30. Ce sera une belle opportunité de rencontrer les grands maîtres invités, et de venir entendre et discuter des toutes dernières nouvelles du monde des échecs.*

OK, again, he mentions a date of when this is going to take place, and he said it's a great opportunity to meet, or, yah, to meet, or listen to this, this, um, this particular event that's going to take place. I thought I heard the word, but I didn't recognize it or understand it, so instead of getting stuck trying to figure out what that word was, I said: OK, I'll let it go also, and hopefully, as I move further into the conversation, it will come back and be repeated again in another context, then maybe I will pick it up.

*Nous profiterons de l'occasion pour honorer les joueurs du Québec qui ont atteint de nouveaux sommets durant la dernière année. Le coût du billet est de 10 \$ (si payé à l'avance) ou de 20 dollars le 17 juillet à la porte (sandwiches et breuvages inclus). De plus, le grand maître Viktor Korchnoi participera au cup 2004. Korchnoi a eu une vie assez colorée. Il a fait défection de l'Union*

*soviétique en 1976 et, par la suite,*

OK. I think, I'm a little more sure, that this guy, is, has got something to do with psychology, um, but, um, I didn't get much more of it.

*les Russes omettaient sciemment de mentionner son nom, même s'il gagnait un tournoi majeur. C'était comme s'il n'était plus de ce monde. Il a été impliqué dans un match de championnat du monde - avec Anatoli Karpov - qui a attiré l'attention des médias par ses nombreux rebondissements.*

Again, back to the same thing I said before, it's something to do with the amount of media attention and, concerning this, champion.

*Le match de championnat du monde de 1978, à Baguio, aux Philippines, mérite pleinement sa réputation de championnat du monde le plus bizarre à avoir été joué. L'équipe de Karpov comprenait le docteur Zukhar, un hypnotiseur*

OK, something about Doctor so and so who is a hypnotist, they're talking about a game, I think, they're talking now, I think, about this guy's bizarre behavior, and, that's as far as I got.

*bien connu, alors que Korchnoi prend dans son équipe un personnage louche qui subissait un procès pour meurtre.*

Um, someone being charged, or prosecuted, um, prosecuted for murder, um, I hope that's what he said (laugh)!

*Il y eut également beaucoup de controverse à l'échiquier et des demandes assez farfelues : passer aux rayons X les chaises, protestations concernant les drapeaux utilisés*

Again we're back, there's quite a controversy, and again, it goes back to 'drapeau' the flag that was used. But um, in what context, I don't know. It's just, it seems I wasn't recognizing the words up to that (*up to that* pronounced with emphasis), and then, when I heard 'drapeau', 'utilise', I focused on those because I knew those words, and I think, when I got them as fast as I did, I may not have listened as attentively to what was coming behind it, to put it in full context. I guess I need to learn, when I recognize, just move on (*move on* pronounced with emphasis), if you recognize it, don't, I don't know, the human mind, it's just a human thing, but I go: 'Ah! Ha!', and you reward yourself with that, saying you got that word, but I think, what happens is, then you lose (pronounced with emphasis) that part.

It is interesting to note, here, that the process of thinking-aloud about his comprehension and his increasing awareness of his inability to understand this second text prompted the student to suddenly challenge and evaluate several fundamental aspects of his approach to L2 listening. In other words, the think-aloud task had the effect of prompting this learner to undertake a complex reflection on his general metacognitive knowledge of L2 listening comprehension.

*et d'inévitables plaintes d'hypnotisme, accusant jusqu'aux lunettes de Korchnoi, qui utilisait des verres dont un côté était des miroirs. Mais quand l'équipe de Karpov lui a envoyé un yogourt aux bleuets pendant une partie sans qu'il en ait fait la demande,*

Um, sending a request, or, um, I'm not quite sure.

*l'équipe de Korchnoi a vivement protesté, prétendant qu'il s'agissait certainement d'un message codé. Dans un jeu comme les échecs, où la jeunesse prime, Korchnoi, qui a eu 73 ans en mars, continue de jouer et de se maintenir au sommet. Comme le disait le maître Éric Beaulieu récemment, monsieur Korchnoi est un monument échiquéen sur la scène mondiale et il est un symbole de détermination et de conservation des fonctions cognitives. Cette année, les or..., les organisateurs ont mis le paquet afin que,*

OK, talking a little more about, um, this guy's got a lot to do with, um, cognitive powers, he's an authority on it, or, an expert in the field, something like that.

*plus que jamais, cette fête échiquéenne soit un grand succès. On ne ménage pas nos efforts afin que les joueurs d'échecs du Québec soient fiers de leur grande rencontre nationale.*

Um, again, something about it being a grand success. In what, I'm not sure (deep sigh).

Researcher: Um, you seem to have found this second one more difficult to understand. Do you know why that might be?

John: Yes, I think it's, um, speaking for myself, there's a few things I need. One is, I need an increased vocabulary, and an understanding of this vocabulary. I find, um, I guess it's like anything new, they speak a little too fast. Um, I also have to learn, and it's in total reverse of what I originally thought, when you get a word, out of everything I've put in context, what I'm finding now, is that I've stuck with that strategy maybe a little too hard: I'm so pleased to find a word, I got what they're saying, I go: "Ah! Ha!", OK, well, stop waving the flags, here!, cause you're missing the rest (pronounced with emphasis) of the conversation! The world doesn't stop just because you've discovered a word! And that's a bit of a problem. How to overcome that, I'm not quite sure. I think, um, listening, listening, listening, listening, um, and um, learning more words, learning more words. The, um, the big part of the French language I find very difficult! Not learning more words, I think anyone can learn more words, you only need a dictionary to learn words, but I think it's the tenses of the verbs, and how things change when they're joined with another word, you know, a verb will mean something in this context, but when it's attached with 'de' or 'à', it has a totally different meaning, and it's knowing those nuances of the language. When the people on the radio speak, or you and I speak in English, we automatically work with those nuances, 'cause they're ingrained, they're just added to over and over and over, but in French, I haven't found a way to grasp that yet. And that's a big part of the problem. I think.

Researcher: Thank you.

John's immediately retrospective concluding remarks again suggest an unplanned and unexpected effect of the thinking-aloud task on the learner's metacognitive awareness. His final comments also reveal that John already had an – accurate – awareness of the sources of

some of his listening difficulties. However, John also accurately reported not knowing *how* to overcome these difficulties; and indeed, his emerging metacognitive awareness and his often judicious strategy use were not sufficient to enable this student to come to a grasp of the more difficult of the two listening tasks presented in the first think-aloud sessions.

It should be added that the beginning-of-study think-aloud reports from the three other students in the LP group reveal extremely similar patterns of metacognitive awareness, self-regulation, strategy use and comprehension in the first listening task. The same remarks apply in the case of the second listening task, with the exception of Peter, the one student in the group who was successful in inferring the meaning of ‘échecs’, and as a result of this, succeeded in understanding the general context – and general meaning – of this second, more difficult text (based, as Peter explained in his think-aloud, on the use of prior knowledge: his recollection that the researcher had mentioned that the LP group instructor had selected the think-aloud tasks, associated to the recollection that, in class, the LP group instructor had often spoken to the students about his avid interest and participation in chess tournaments).

To sum up, as was evident also in the data from the participants’ stimulated recall protocols on the questionnaire, the beginning-of-study think-aloud data confirm the fact that, at the beginning of the study, students in the high-proficiency group processed aural messages in French with a degree of metacognitive awareness, self-regulation, and skill in listening strategy use which was notably higher than that exhibited by the students in the low-proficiency group. Although not necessarily lacking metacognitive awareness, self-regulation, or strategy knowledge, the students in the LP group clearly focused their listening

at a more basic, textual level, and they reached considerably lower levels of accurate comprehension. This appeared to be due in large part to their impoverished lexical knowledge, and to the negative effects of the resulting lack of automatization in perception on their comprehension capabilities.

To allow the reader to compare the data just previously presented with the linguistic processing, metacognitive awareness, self-regulation, strategy use, and listening comprehension exhibited by students in the low-proficiency group at the conclusion of the study, the following section presents Emma's and John's reports in the end-of-study concurrent think-aloud task.

#### **4.2.3 Examples of metacognitive awareness, linguistic processing, and listening comprehension reported by the students in the low proficiency group in the end-of-study think-alouds**

It should be noted that the text which was utilized for the low-proficiency group's final think-aloud (see Appendix D) was originally selected by the high-proficiency group instructor for use as one of the early class listening exercises conducted with these more advanced students (and observed by the researcher).

It should be noted also that the first student to perform the end-of-study think-aloud asked to be allowed to decide the timing of her reporting in the *first* as well as in the second listen, because she strongly felt that researcher-predetermined interruptions for reporting could hinder her processing and comprehension of the aural text. The researcher felt an obligation to grant this participant's request. To nevertheless preserve consistency in the data collection

procedure following this unexpected modification to the planned methodological design, the researcher gave all successive participants the same freedom to decide the timing of their reporting in *both* listens.

#### 4.2.3.1 Examination of Emma's end-of-study think-aloud data

The examination of the data from Emma's beginning-of-study think-aloud revealed that (a) she processed aural texts in French, for the most part, at a very basic, word-by-word level, (b) she was able to reach only a very poor, highly fragmented comprehension – chiefly by process of unverified elaboration from the translation of a few isolated words – and (c) she exhibited poor metacognitive awareness, poor self-regulation, and poor strategy use. In a clear contrast, Emma's protocols in the end-of-study concurrent think-aloud task confirm the improvement in linguistic processing, metacognitive awareness, self-regulation, strategy use, and overall listening comprehension which this student reported in her numerical questionnaire data, stimulated recall questionnaire data, end-of-study summative report data, and which was observed in the classroom.

Following is Emma's complete report in her first listen to the final think-aloud listening task:

*« Ici, Robert Desbiens. Depuis 11 heures quatorze ce matin, vous êtes menacés par le printemps. Vous pouvez enfin réaliser vos rêves, tout boussculer dans votre vie et même tomber amoureux ou amoureuse. Nous vous demandons, ce soir, si vous subissez la fièvre du printemps. Bonsoir, mesdames, messieurs ! Bonsoir, Louise Arcan ! ». « Bonsoir, Robert Desbiens ! Chers auditeurs, pour répondre à notre question, nous vous invitons à nous téléphoner dès maintenant*

O.K. So, obviously, it's a talk show and they introduced themselves and they're talking about spring time, and for example the fact that it's the time of year to fall in love. And this talk show is going to be talking about this subject, about if, this time of year, you fall in love. And she, she's just come on board, and they're going to be answering questions.

In a sharp and immediately apparent contrast to her approach in the beginning-of-study think-aloud, in this end-of-study listening task, Emma immediately focused her efforts and attention on the identification of the general context. She reached a comparatively high degree of accurate and detailed comprehension in her interpretation of the opening lines of the French passage. Another interesting contrast is that, in this instance, Emma's report of her comprehension is phrased in the form of a *summary in her own words*, whereas in the beginning-of-study think-aloud, she most often reported unconnected, literal translations of isolated individual French segments. Moreover, her interpretation of the introduction of this final think-aloud task shows coherence and cohesiveness. In addition, relatively few hesitations are apparent in this end-of-study report, suggesting that processing, understanding and reporting may have concurrently taken place with relative ease.

*en composant le 285-3728 si vous appelez de la région montréalaise. Si vous appelez de l'extérieur, vous faites 0 - 514 - 285-3728 et vous faites virer les frais. Robert Desbiens ? ».*

*« Et bien, voilà, c'est fait, la première des quatre saisons est arrivée. C'est celle, si l'on veut, du devenir. C'est la saison de la préparation, de l'espoir, des projets et beaucoup aussi*

O.K. Um, They give you the numbers to call if you're inside the Montreal area, and if you're outside the Montreal area. And they're saying this is the beginning of the season where, you do certain sports, or you get ready for spring, and um, there was another part, but I didn't get it. O.K.

Again, Emma reached a comparatively high level of accurate and detailed comprehension of the above passage. In contrast to her report in the first think-aloud, she did not, in this instance, waste attention and time converting the telephone numbers given into their English mathematical equivalents, but rather, she efficiently retained the general concept that contact numbers were provided. Evidence that some mishearing / segmentation problems remained is nevertheless apparent in her erroneous perception of 'de l'espoir' (hope) as sports,

suggesting that she perceived ‘les sports’ rather than ‘l’espoir’. However, in this case, her misinterpretation was neither illogical nor inconsistent with the present context of spring, in contrast to completely illogical and incongruous misinterpretations such as ‘grand-mother’ for ‘grand master’ in her beginning-of-study think-aloud.

*de la folie. Ce pourrait même être la saison des coups de foudre... foudroyants. Le printemps, c'est, contrairement à l'été, qui est la saison de la possession, celle du désir ; c'est la saison de l'adolescence, plutôt que celle de l'âge mûr. L'été, disait*

Something, they're making a comparison: they're comparing summer, that it's a time for possession, and spring, that's a time for adolescence, and I think something about being crazy.

Again, a clear improvement in the focus of linguistic processing can be seen in this segment, where Emma grasped the essential point that a comparison was being made, in contrast to her approach in the first think-aloud, where she chiefly processed the text word by word with very poor discernment of the essential points. Almost entirely absent also from this end-of-study report is any evidence of serious attention or memory problems in the processing of the listening task, in sharp contrast, once again, to her beginning-of-study reports.

*Victor Hugo, c'est la saison des nids, et le printemps, c'est la saison des amours.*

O.K. so, yes (pronounced in confirmatory tone), they're talking about spring, and about spring being the season of love.

Again, in contrast to her first think-aloud report, where Emma's attention was almost completely taken up by the processing of individual words, and where she appeared at times to have lost track of the context altogether, in this case, her think-aloud protocols reveal that, throughout her processing, the context of spring which she had inferred early into the listening remained constantly present in her mind. The first few words of her above protocols

point also to the use of comprehension verification (in this case, verification of the context), a strategy which was almost completely absent from her first think-aloud reports.

*Il y a, dans le printemps, quelque chose de magique et aussi de très perceptible en chacun de nous ; et il arrive même, parfois, qu'un printemps transforme une vie. Mais, pour être sensible au printemps, il y faut bien sûr de la connivence et aussi entrer dans le jeu. C'est difficile d'y échapper, au printemps, en tout cas pour les peuples du Nord, c'est plus évident : nous assistons à l'allongement graduel des jours, aussi au réchauffement de la terre, à l'animation des villes, par exemple : l'ouverture des bistrots, les flirts qui se multiplient... En fait, notre météo du coeur s'en trouve souvent agréablement bouleversée.*

O.K. They're saying spring is a magical season, something about, that it can transform your life, um, or something, that you're transforming into a new, a new mind frame, and but then, it's a dangerous season too, and they talk about all the changes like the bistrots open, and how the weather becomes pleasant, and other changes like that.

Once again, Emma's processing and comprehension in the above segment are in sharp contrast with those which she exhibited in the earlier think-aloud task. Emma is continuing to reach a comparatively high level of accurate and detailed comprehension. In particular, she is continuing to report her understanding largely in the form of a coherent and cohesive summary in her own words. This summary reveals a continuing focus on the essential meaning being conveyed in the aural text, rather than excessive attention to individual words. It does reveal also an accurate understanding of an increased proportion of the vocabulary. Nevertheless, a second mishearing is apparent in this segment: Emma's understanding that spring was also a 'dangerous season', resulting, it is reasonable to surmise, from the auditory confusion of '(entrer) **dans le jeu**' (play along) with '**dangereux**' (dangerous).

As can be seen from the following segments, Emma was able to maintain her more sophisticated processing approach and her comparatively high level of accurate comprehension in the remainder of the listening task.

*Et c'est vraiment ce que l'on appelle la fièvre du printemps, et cet état d'âme n'est pas imaginaire. Des scientifiques ont en effet découvert que le cerveau mesure la longueur des jours, et qu'en hiver, quand les jours sont plus courts,*

O.K. They're talking about, I think they're talking about, how you change, like, it's a different, cause, you know, they're saying: now the days are getting longer, and so, I think they're talking about how it's having an effect on you, you know, that type of thing.

*une des glandes du cerveau, la glande pinéale,*

O.K. The pineal gland? O.K. O.K.

*produirait une substance appelée mélatonine et qui serait responsable des dépressions. A mesure que le printemps approche et que les jours rallongent, la glande pinéale produirait plus de mélatonine et donc redonnerait le goût de vivre.*

O.K. Right, so, I think what they're saying is: in the winter, um, because your gland, it's not, I forget exactly the words they used but: it's a negative thing, but then in the spring, because this gland must be, expelling this kind of, then you're feeling happy and light-hearted and you know, stuff like that. That's just what I heard. But I don't know exactly how I heard that. I'm not sure if I just assumed it or if I, kind of, decided, well, actually, I heard how it, how it changes, you know, they talked about bad effects with you, like negative and then positive effects, and it sounded like they were giving an opinion or information about like research about your glands, how it affects you now that it's spring. I know it talked about that.

Emma's report that she "... forgot exactly the words they used but: it's ..." once again

clearly highlights the fact that she processed the text at a far greater distance from the base

word level in this final think-aloud task than she had done in the beginning-of-study think-

aloud. Once again also, the first few words of her report suggest that Emma continued to

verify her comprehension as she proceeded further into the task, in this instance, confirming

her correct perception of 'glande pinéale' and its logical fit within the general context of an

apposition of winter with spring. It is reasonable also to say that the very fact that Emma

reported not remembering *how* she came to her – correct – general understanding of the text

suggests also that she was processing this text at a distance from the words sufficient that she

*more automatically* understood the general meaning and the general concepts being

conveyed in the words.

*Alors, voilà ce qu'on pourrait ou ce qui pourrait expliquer le fait que vous vous soyez sentis tout dernièrement, même aujourd'hui peut-être, frivoles et même légèrement, même légers plutôt, un peu fous et heureux tout à la fois, et cela, sans raison particulière. Alors, le printemps est arrivé, nous vous demandons, ce soir, si vous en subissez les effets,*

Um, I think they're going out to the speakers soon, or, um, I'm not exactly sure what they're saying but I think they're saying something about, you know: can you tell us if you find this, you know, if there is a change in you, you know, give us feedback on this, tell us if you do or not. I think they're asking people to tell them: do you feel the effects when springtime comes along?

*si vous croyez à la fièvre du printemps, si vous rêvez d'y succomber, si vous avez le goût de vous laisser séduire par elle. Bien sûr, il y a mille façons d'être séduit : faire des projets, préparer ses vacances,*

O.K., so you get all this energy and if you feel parallel, I'm guessing here, if you feel parallel to what this evidence is showing, and you're getting all this energy to do the projects, more energy to do all those things that start when spring starts,

*acheter des graines de semence, tomber amoureux sans réfléchir, ce qui constitue un pléonasme ou alors respirer simplement le parfum de la neige qui fond sur les gazons ou sur le macadam qui se réchauffe.*

something about the grass, maybe the fresh air and the grass.

*Alors, nous vous demandons, ce soir, si vous subissez la fièvre du printemps ou si vous avez le goût d'y succomber.»*

'fièvre (sic) de (sic) printemps' still or something, I'm still not sure what that first word is in there, and 'goût' I don't know what that is either, if you have the 'goût', 'goût', I'm guessing: if you're not very happy, but actually, I'll try not to make my mind up on this one yet. 'goût'. I really don't know what that means.

In sharp contrast also to her beginning-of-study report, it is interesting to note that, throughout her listen to this final listening task, Emma used elaboration extremely sparingly. In the case of the very last segment above, for example, she cautiously reserved judgment on the meaning of what she had (in fact incorrectly) perceived as 'fièvre de printemps' and on 'goût', rather than proceeding to the immediate – and typically erroneous – elaborations which we saw her inflexibly hold on to as certainties in the beginning-of-study think-aloud task. All of these observations are again perfectly consistent with the improvement in her listening skills which Emma described in the questionnaire stimulated recalls for instance (see, for example, her protocols for items 26 or 39, in section 4.1.3).

For the last listen, Emma chose to hear the complete text without reporting interruptions. Methodologically speaking, her second report could therefore be argued to constitute an *immediately retrospective report* of understanding, rather than a concurrent think-aloud report. The researcher judged that this sacrifice to methodological rigour was unavoidable, given the fact that, as previously mentioned, some of the participants expressed feeling that predetermined interruptions for reporting could hinder their concentration and comprehension in the final think-aloud task. Following is Emma's brief concluding report immediately following her final – uninterrupted – listen to the end-of-study listening task.

The fever, the fever of spring, 'fièvre de printemps', spring fever! And um, otherwise, pretty much what I thought before, what I said before. Um, I heard it a little more clearly, specifically, they certainly did talk about this gland and about how it causes depression in the winter, how it affects you differently in the winter, and then in the spring you get all this energy for all kinds of projects, energy for sports and all that kind of stuff.

Emma's concluding report following the final listen indicates that she used this second listen to verify the accuracy of her comprehension of the text. Interestingly, in addition to verifying her interpretations, Emma was able, in this second listen, to accurately perceive and, as a result, to correct her interpretation of 'fièvre'. Interestingly also, although she did not pick up her mishearing of 'l'espoir' for 'les sports', it is fair to say that her interpretation of 'energy for sports' was in no way illogical or incongruous with the given context. It is fair to say also, therefore, that this mishearing and its resulting misinterpretation had no appreciable negative effect on the student's general level of comprehension and accuracy in the listening task.

Emma's concluding explanations further confirm the observations made in this analysis of her end-of-study concurrent think-aloud and immediately retrospective reports:

Researcher: O.K. Thanks. Anything else you'd like to add?

Emma: Well, not really, I didn't hear anything negative (meaning in all likelihood that she didn't hear anything which contradicted her previous report of understanding). Basically, the talk show is gonna be about, you know, what people think about, do they feel, if they feel the same kind of emotions as the research says, do they feel such things as extra energy to do all this stuff or to fall in love, um, the desire to do stuff. Um, so, again, in the beginning, it was their introduction, they give the numbers and then they explain how there is an actual change when spring comes along, and at the end, they're gonna ask us now, to, give our opinions on it, if we feel the same type of thing. How I got that is, um, well, I guess right away I knew it was about spring, I heard words for that you fall in love, so obviously that kind of gives you an idea, and it fits with everything else they were saying about what spring's all about, and I got the numbers and all that kind of stuff, and then they talked about the glands and their effects; the last time, it was a lot clearer to me. I kind of got the idea of the meaning at the beginning, but it was a lot clearer to me in the last one how they actually made the comparison between the winter and the spring, and um then they gave me examples, and um, so how I got there, was I think, um (brief pause for silent thinking), I think, um, for the first time, it was by like, in the beginning just listening to the whole thing and trying not to jump to any conclusions, and then for the second time, it was by spending a little more time picking up details and then once I was able to pick up a few more details, I filled in the blanks naturally, and sort of hearing it all together.

Interestingly absent from Emma's final statements is any further mention of spring as an 'also dangerous season', suggesting that this earlier tentative (mis)interpretation (due to misperception) may (rightly) have been ruled out by the student as unverifiable, or incongruous with the general meaning and focus of the aural text. Whatever the case may be, it is interesting to note that this mishearing did not lead to any serious misinterpretations of the general meaning of the aural text. This is once again in direct contrast with what we observed in Emma's beginning-of-study think-aloud reports, which contained evidence of numerous illogisms and nonsensical interpretations resulting from hasty, unverified elaborations.

We now turn to the examination of John's end-of-study think-aloud data.

#### 4.2.3.2 Examination of John's end-of-study think-aloud data

Our earlier examination of John's beginning-of-study think-aloud report revealed that, although his lexical knowledge in French was limited, this student was able to reach largely accurate – albeit minimal – levels of comprehension in the first think-aloud task, owing in large part to an emerging metacognitive awareness, self-regulation, and often judicious strategy use. However, in the second of the beginning-of-study listening tasks, which presented a greater degree of difficulty, John's metacognitive awareness, self-regulation, and strategy knowledge did not suffice to compensate for his limited lexical knowledge. He was unable to identify the topic of the second task, and consequently, he reached only a very fragmentary comprehension of that particular text.

As in Emma's case, an improvement in John's linguistic processing, metacognitive awareness, strategy use, and overall level of comprehension is clearly apparent in his end-of-study think-aloud report, consistent with this student's numerical and stimulated recall questionnaire data (see, for example, John's stimulated recall protocols on item 15, section 4.1.1, or on items 11 and 24, section 4.1.2, or on item 39, section 4.1.3), consistent with his end-of-study summative report responses, and consistent with the researcher's observation data. Following is John's complete first report in the final think-aloud task.

*« Ici, Robert Desbiens. Depuis 11 heures quatorze ce matin, vous êtes menacés par le printemps. Vous pouvez enfin réaliser vos rêves, tout bousculer dans votre vie et même tomber amoureux ou amoureuse.*

I'm not sure what he's saying there: fall or something, and it's funny, and, but I'm not quite sure what he's getting at there, but from what I hear and when I take that and try to carry it forward into the rest of the story, I guess looking for, a story that's a bit funny, um, something that happens or that's

happened is funny, um, and that leads into the call-in show. That's what I got out of it, and what I missed, I don't think it's key (pronounced with emphasis) to the story itself or to what he's talking about.

As we just previously observed in Emma's case, from the opening lines of the passage, John focused his efforts and attention chiefly on trying to identify the topic of the passage, and on trying to distinguish the essential information from the non-essential details in the text. His report indicates that he also tried to identify the logical links interconnecting the various parts of the aural text.

*Nous vous demandons, ce soir, si vous subissez la fièvre du printemps.*

He's talking about spring, yes, about the unrolling of spring, you know, spring is coming, and that's what they're gonna be talking about.

*Bonsoir, mesdames, messieurs ! Bonsoir, Louise Arcan ! ».*

*« Bonsoir, Robert Desbiens ! Chers auditeurs, pour répondre à notre question, nous vous invitons à nous téléphoner dès maintenant en composant le 285-3728 si vous appelez de la région montréalaise. Si vous appelez de l'extérieur, vous faites 0 - 514 - 285-3728 et vous faites virer les frais. Robert Desbiens ? ».*

*« Et bien, voilà, c'est fait, la première des quatre saisons est arrivée. C'est celle, si l'on veut, du devenir. C'est la saison de la préparation, de l'espoir, des projets et beaucoup aussi de la folie. Ce pourrait même être la saison des coups de foudre... foudroyants.*

He's talking about it's the first of the 'quatre saisons', it's a season of new beginnings, of planning, and I think he's asking them to give them any stories about spring. I think?

As in Emma's case, once he had surmised that the context was spring, John proceeded to confirm the accuracy of this assumption. In so doing, he continued to focus his efforts and attention chiefly on the consolidation of this framework. Like Emma, he did not ascribe any time or attention to the mathematical conversion of the numbers given, or to a word by word deciphering of secondary details within the sentences. He also does not appear to have allowed any unknown lexical item to divert his attention away from his search for the general meaning of the text and the verification of his comprehension.

*Le printemps, c'est, contrairement à l'été, qui est la saison de la possession, celle du désir ; c'est la saison de l'adolescence, plutôt que celle de l'âge mûr. L'été, disait Victor Hugo, c'est la saison des nids, et le printemps, c'est la saison des amours.*

I think, summer's the season of birds, but spring is the season of love. 'nids', I think that's what he says, but. He's just comparing the two seasons and the focus is: but we want to talk about spring (pronounced with emphasis) here.

In this segment, as did Emma, John recognized that the two essential points to retain were that a comparison between summer and spring was made, but that the topic for discussion in the talk show would be spring exclusively.

*Il y a, dans le printemps, quelque chose de magique et aussi de très perceptible en chacun de nous ; et il arrive même, parfois, qu'un printemps transforme une vie.*

Talking about the, the magic things of spring, I mean, just another part of the same story, he's still emphasizing spring and why (pronounced with emphasis) he wants to talk about it. Earlier, he said something about summer being one season, but spring, again, is a season of magic things, and, that type of idea.

Again, John's report suggests that he continued to verify and consolidate his framework of spring, and that in so doing, he focused on drawing the essential, general meaning conveyed by the rapid flow of words. As in Emma's case, John's report was consistently expressed in the form of a *summary in his own words*, rather than in the form of literal translations of a few familiar French words as we frequently saw in his beginning-of-study think-aloud reports. In fact, John's end-of-study report indicates that he was able to distance himself from the base word level to the considerable extent that he was able to grasp and to convey, in his report, the fact that the *purpose* of the provision of detailed information about spring was to serve the talk show host's *intent* to make it clear why he wished to discuss this topic.

*Mais, pour être sensible au printemps, il y faut bien sûr de la connivence et aussi entrer dans le jeu. C'est difficile d'y échapper, au printemps, en tout cas pour les peuples du Nord, c'est plus évident :*

*nous assistons à l'allongement graduel des jours, aussi au réchauffement de la terre, à l'animation des villes, par exemple : l'ouverture des bistrots, les flirts qui se multiplient... En fait, notre météo du coeur s'en trouve souvent agréablement bouleversée.*

Talking about the agreeable weather and um a time to get outside, a time when the bistrots are open, and um, um, um, O.K.

*Et c'est vraiment ce que l'on appelle la fièvre du printemps, et cet état d'âme n'est pas imaginaire. Des scientifiques ont en effet découvert que le cerveau mesure la longueur des jours, et qu'en hiver, quand les jours sont plus courts, une des glandes du cerveau, la glande pinéale, produirait une substance appelée mélatonine*

Um, the brain recognizes the length of the day, versus a short day, and it produces a chemical in the brain. I heard 'cerveau', 'produire', and he says the name of the chemical, I'm trying to think of what it is now, (brief pause for silent thinking followed by laugh), um, I should know this, chocolate does the same thing (laugh), but he mentions the name of the chemical and he's talking about the 'cerveau' and he's talking about the length of the day, and the brain recognizes the different length of the day, and depending on it, it produces that chemical.

As in Emma's case once again, John reached a comparatively high level of accurate comprehension of this more difficult segment. Compared with his beginning-of-study think-aloud data, John's report also suggests a considerable improvement in his lexical knowledge of French, and perhaps also a greater automaticity and accuracy in the perception of French sounds.

*et qui serait responsable des dépressions. A mesure que le printemps approche et que les jours rallongent, la glande pinéale produirait plus de mélatonine et donc redonnerait le goût de vivre.*

'métonine' (sic - barely audible) I think is the name of the chemical, and it helps, combat I think, depression, and it is produced more, as the days grow longer, and it helps.

*Alors, voilà ce qu'on pourrait ou ce qui pourrait expliquer le fait que vous vous soyez sentis tout dernièrement, même aujourd'hui peut-être, frivoles et même légèrement, même légers plutôt, un peu fous et heureux tout à la fois, et cela, sans raison particulière.*

Um, something about crazy, um, for no particular reason, he wants to do a comparison of something, I'm not quite sure what he's talking about there, but he's talking about the fact that people go crazy for no particular reason and um.

Similarly to Emma once again, John rarely ventured to make inferences or elaborations concerning what he assessed to be secondary details if these assumptions could not be

immediately verified. Moreover, when he did not spontaneously understand the meaning of what he assessed to be secondary details, John immediately resumed processing in synchrony with the rapid flow of words, retaining only the essential idea conveyed in the preceding unclear segment, and disregarding the ambiguous secondary details in that same segment. These observations are all perfectly consistent with the data from John's stimulated recall protocols on the questionnaire (see, for example, John's recall protocols on questionnaire item 35, in section 4.1.3), and with his summative report data.

*Alors, le printemps est arrivé, nous vous demandons, ce soir, si vous en subissez les effets, si vous croyez à la fièvre du printemps, si vous rêvez d'y succomber, si vous avez le goût de vous laisser séduire par elle. Bien sûr, il y a mille façons d'être séduit : faire des projets, préparer ses vacances, acheter des graines de semence, tomber amoureux sans réfléchir, ce qui constitue un pléonasme ou alors respirer simplement le parfum de la neige qui fond sur les gazons ou sur le macadam qui se réchauffe. Alors, nous vous demandons, ce soir, si vous subissez la fièvre du printemps ou si vous avez le goût d'y succomber ».*

O.K. he's talking about the snow is no longer there, the grass is out, um, it's still all leaning that way, um, connecting to a point, see, what I would do before is search for the point and be happy I had that point, but now I'm finding the point or raison and then I try to move the story back in my mind. Still probably not the best way to grasp it, but that's what I'm doing now. O.K., I know where he's heading, you know, he's telling you it's a season, so I go back the snow no longer there, the grass, that type of thing (ambiguous statement. In all likelihood means that he thinks back to earlier parts of the text and checks whether they support his general interpretation).

As did Emma, John chose to hear the text uninterrupted in the final listen, after which he immediately added the following closing explanations:

O.K. So, the announcer and another host are on the radio. Um. It's a show where they're enticing people to call in, and I think the topic of the conversation is going to be spring. Um. He's describing spring as he knows it and putting out all these possible feelers for the public, so when they call in they'll have a reference point. Um, the girl gives two numbers, one for within the Montreal area, one for when you're outside the Montreal area to call, um, then he goes on and describes spring as a season of love, and desire, and planning, and new, um, things, it's a season of magic, um, people go crazy without reason, it's a season that sees the absence of snow and the starting of grass, the bistros open, all the things that are happening, it's a season of hope, um, I think, I think what the announcer is trying to do is to, to give the listeners some reference point so that when they call in, so that they can reference, a funny story maybe, something that happened to them, or something to look forward to. Some of the details are still obscure, in part because, he still talks a little fast for me (laugh), but I would feel, if I was going away from that story and X, who is an anglophone, later asked

me: "What was said?", I think I would feel pretty comfortable in describing that story to her as I have to you. I think I would still have 60 or 70 % of the story, so she could get an idea of what went on. But again, it goes back to um, not focusing on just a single word, and I did it a couple of times and I told you that, I focused on 'grass' and 'snow', but then again I tied it in to, I tried to back up in to the conversation, where I knew he was already talking about spring, and just sit and see: how was he leading that part into the next part of the story? So, now, whereas before, I'd take one word and I'd say: "Hey! I heard him say 'snow'! Hey, that's great! I know that's 'snow'!", and by that time, it's ten minutes down the road! Now, I'm going both sides of the conversation. Maybe a little faster, because um, like the first of the story, when he introduces himself and you know, he gives the name of the program, I'm not paying that much attention, because I know it's not as important, I know it's just a roll-up to something, and I'm preparing myself to start listening when he gets, when he hits 'droit' (? sic). I think it's a combination of things, one is the competition in itself, trying to know more, there's that gratification we all need, and the other thing is, listening to more French, and this has been a part of it: trying to comprehend more, but um, knowing more of the vocabulary is a big help, like, um, once he said 'cerveau', and mentioned the chemical, he tied together four or five sentences in that, so that I knew what he was talking about. So, it's a combination of things, but this um, I'm going to call it competitiveness, this listening, because I have a competitive nature, my competition to myself is to learn as much as is possible. Yah, I think it's been a tremendous help for me, that and continuing to practice learning the vocabulary as you go.

The examination of John's report of linguistic processing and understanding in the end-of-study think-aloud reveals an appreciably higher level of accurate comprehension of the aural passage than was evident in the very first (easier) think-aloud task (where he had reached largely accurate but *minimal* levels of comprehension). It also illustrates an appreciable refinement in the metacognitive knowledge, self-regulation, and strategy use applied in L2 listening with, in particular, consistent use of retrospective evaluation of comprehension, and very judicious assignment of attention during listening. Most interesting perhaps is the fact that, although growth appears evident both in John's and in Emma's lexical knowledge of French, the improvement, most noticeably, in their strategy use and in their overall listening comprehension appears far greater than the growth in their French vocabulary. As in Emma's case, the examination of John's data also clearly confirms that, in the final weeks of the study, this student's linguistic processing was conducted at a distance from the base word level far greater than that which was evident at the beginning of the study. John's report, like Emma's, in fact clearly confirms that – as was suggested by the analysis of the data from his stimulated recall protocols on the questionnaire – this student indeed processed the final

listening task at a level of metacognitive, self-regulatory, and strategic reasoning which closely resembled that exhibited by Helen or Nick in the higher proficiency group.

Although space limitations do not allow the presentation of the think-aloud data from the other participants in the low-proficiency group, it should be noted that the end-of-study think-aloud reports from these other LP students demonstrate equal or superior levels of improvement in linguistic processing, metacognitive awareness, self-regulation, strategy use, and overall listening comprehension when compared to those exhibited by Emma and John.

We now conclude with the examination of Helen's and Nick's end-of-study think-aloud reports.

#### **4.2.4 Examples of metacognitive awareness, linguistic processing, and listening comprehension reported by the students in the high-proficiency group in the end-of-study think-alouds**

In contrast to the improvement which was clearly noticeable over the course of the study in the LP students' listening comprehension, for their part, the HP students did not exhibit clearly improved levels of comprehension in this end-of-study task, compared with their overall comprehension in the beginning-of-study think-aloud task.

Nonetheless, in answer to the second research question, the high-proficiency students' end-of-study think-aloud data provide interesting further evidence of intricate interrelationships between phonological skills, lexical knowledge, metacognitive awareness, self-regulatory abilities, strategic knowledge and abilities, and the level of success attained in L2 listening

comprehension. These think-aloud data also provide further evidence concerning the precise *components* of metacognitive awareness, self-regulation, and strategy use which appear to be necessary for success in L2 listening.

#### 4.2.4.1 Examination of Helen's end-of-study think-aloud data

For the first listen, Helen chose to hear the text without any interruptions.

*Le romancier qui transforme la réalité constante, brutale et déplaisante, pour en tirer une aventure exceptionnelle et séduisante, doit, sans souci exagéré de la vraisemblance, manipuler les événements à son gré, les préparer et les arranger pour plaire au lecteur, l'émouvoir ou l'attendrir. Le plan de son roman n'est qu'une série de combinaisons ingénieuses conduisant avec adresse au dénouement. Les incidents sont disposés et gradués vers le point culminant et l'effet de la fin, qui est un événement capital et décisif, satisfaisant toutes les curiosités éveillées au début, mettant une barrière à l'intérêt, et terminant si complètement l'histoire racontée qu'on ne désire plus savoir ce que deviendront, le lendemain, les personnages les plus attachants.*

*Le romancier, au contraire, qui prétend nous donner une image exacte de la vie, doit éviter avec soin tout enchaînement d'événements qui paraîtrait exceptionnel. Son but n'est point de nous raconter une histoire, de nous amuser et de nous attendrir, mais de nous forcer à penser, à comprendre le sens profond et caché des événements. A force d'avoir vu et médité, il regarde l'univers, les choses, les faits et les hommes d'une certaine façon qui lui est propre et qui résulte de l'ensemble de ses observations réfléchies. C'est cette vision personnelle du monde qu'il cherche à nous communiquer en la reproduisant dans un livre. Pour nous émouvoir, comme il l'a été lui-même par le spectacle de la vie, il doit la reproduire devant nos yeux avec une scrupuleuse ressemblance. Il devra donc composer son oeuvre d'une manière si adroite, si dissimulée, et d'apparence si simple, qu'il soit impossible d'en apercevoir et d'en indiquer le plan, de découvrir ses intentions.*

She immediately provided the following retrospective report:

O.K. It's about two different styles of writing. That there is the one style that, um, (brief pause for silent thinking) it is, more, about, kind of entertaining and um, um, um, just about entertaining people. It has to have the appearance of reality, but things are, things are written in such a way as to really draw the person into the story, and it comes to, so that when it comes to the point when it all, like when it reaches the climax of the story, that we, that we're kind of content with what happened but that we're still interested in the main characters and in what might have happened on the next day or whatever. That, that we're very taken up with the story and what's happened to the people. And the second (pronounced with emphasis) type of writer is one that, wants to give an exact image of life, but in such a way that we, that we, it makes us think, about the important meanings and the hidden meanings behind things, and that (pronounced with emphasis) type of person looks at the universe and tries to, like, it's their own (pronounced with emphasis) personal vision of the world that they're trying to, to give

to the reader, and they have to be, more, scrupulous, in their depiction, I guess, in the way they write their story, they're more scrupulous to details whatever that's not (pronounced with emphasis) made up, whatever, and that's pretty much, um, there's more detail than that, but, um.

Well it's funny, cause when I first started listening, I was: O.K., so, it's about writers, but then, once I got the sense of the comparison, with me, like someone point to his memory, like, I have to, like, write key words down to remember exactly the detail. Like, I could have told you without any notes it's about two forms of writing, one that's kind of more fictionalized and one that's more real, but I wouldn't have been able to pull out as much, maybe details without having notes. I always remember really globally, I don't remember details.

Helen's summary of her overall comprehension of this difficult text reveals a high degree of accurate comprehension of almost all essential points in the text. In particular, she accurately grasped the key fact that a comparison was made between two styles of writing, one which, in Helen's words, could be qualified as "more fictionalized", the other "more real", and with, once again, the help of notes which she took while listening, Helen correctly recounted a number of characteristics pertaining to each distinctive style. Only one misunderstanding is apparent in her retrospective report, her interpretation that: 'but that we're still interested in the main characters and in what might have happened on the next day'.

Following is the complete concurrent think-aloud report which Helen provided in her second and final listen to the text. These protocols give us detailed insights into the obstacles that Helen met in her linguistic processing of this task, and into how she dealt with these difficulties.

*Le romancier qui transforme la réalité constante, brutale et déplaisante, pour en tirer une aventure exceptionnelle et séduisante, doit, sans souci exagéré de la vraisemblance, manipuler les événements à son gré, les préparer et les arranger pour plaire au lecteur, l'émouvoir ou l'attendrir.*

Um, (brief pause for silent thinking) basically the idea that the writing is going to be, seductive, like, it's just another way of describing the idea, but I guess it's more than entertaining, it's to draw you in, and to make you part of it, and the idea that you would, that you would like manipulate events as you wished, or, yah, as he wishes. Referring to a 'romancier', a novel writer.

From the outset in the second listen, Helen was able, while confirming her earlier general interpretation ('just another way of describing the idea, but'), to add further precision to her recounting of the passage. For example: she slightly modified her earlier choice of the word 'entertaining' – to describe the first writing style – after she picked up the slightly different nuance conveyed in the word 'séduisante', thus reaching an even closer level of accurate and complete comprehension in this opening segment. She also added the important specification that the text referred to 'a novel writer', again reaching an even closer level of accurate and complete comprehension than she had reached earlier when she spoke of a 'writing style'.

*Le plan de son roman n'est qu'une série de combinaisons ingénieuses conduisant avec adresse au dénouement.*

Um, that's actually one part that I had a little trouble with, like, the idea that, and in the sentence before, I wasn't exactly clear on those two sentences there, what exactly was being said, but like, right from the start, did it have to be done in this way?, but no, I didn't get much, I didn't get precision from that.

*Les incidents sont disposés et gradués vers le point culminant et l'effet de la fin, qui est un événement capital et décisif, satisfaisant toutes les curiosités éveillées au début, mettant une barrière à l'intérêt, et terminant si complètement l'histoire racontée qu'on ne désire plus savoir ce que deviendront, le lendemain, les personnages les plus attachants.*

O.K. That was the idea that like all the, all, everything has to lead up to the, to the culmination, which is to say that the most important and decisive part of the story, and, the idea that, um, that you, that your (brief pause for silent thinking), the curiosity is satisfied so much that, like so much that you are interested in what happened, like to what might happen to the main person the next day. But then there was something like, there was something like the idea that, like a barrier to the interest?, I didn't know what that was, I didn't quite get what went with that, what went before that?, um, cause I would have thought it would be no (pronounced with emphasis) barriers to the interest, but I didn't get that, so I don't know exactly. If it means really barriers to the interest, then again, that's where sometimes I read into the text what I might think, because to me, if it's a really interesting book, that's how you get people who wanna read the same author over and over again, you write this type of book because, and that's why series are important, so that goes counter to what I know. But I've seen that before, where if something doesn't agree with what I know, I put it aside, and that's one thing that, before the exercises I wasn't quite as aware of, I knew I did it, but I didn't realize how much I did it. So, I have to see.

The above protocols clearly illustrate, once again, Helen's sharp metacognitive awareness, self-regulation, strategy knowledge, and their beneficial influence on her listening processing and comprehension. Let us consider, for instance, the following segment in her report:

'...but then...there was something like the idea that, like a barrier to the interest?, I didn't know what that was, I didn't quite get what went with that, what went before that?, um, cause I would have thought it would be no (pronounced with emphasis) barriers to the interest, but I didn't get that, so I don't know exactly. If it means really barriers to the interest, then again, that's where sometimes I read into the text what I might think, because to me... so that goes counter to what I know. But I've seen that before, where if something doesn't agree with what I know, I put it aside... So, I have to see.'

This insight into Helen's reasoning reveals that, in hearing the above segment a second time, (1) she was aware of her incomplete understanding of this segment, and aware that this incomplete understanding resulted from the fact that she failed to perceive some of the words immediately preceding that segment; (2) she also became aware, upon hearing the segment a second time, that she had not perceived a negation which she had expected to hear, given her earlier interpretation; (3) the absence of this anticipated negation prompted Helen to remember that she had a tendency toward too spontaneously rejecting interpretations which ran counter to her common sense or intuitions; (4) in light of her awareness of the three preceding points, Helen began to consider the possibility that she had incorrectly interpreted this segment, and (5) she consequently reported that she would further consider the question of the exact meaning of that segment as she listened to the rest of the passage.

*Le romancier, au contraire, qui prétend nous donner une image exacte de la vie, doit éviter avec soin tout enchaînement d'événements qui paraîtrait exceptionnel.*

O.K. so, this is about the novelist who wants to give an exact picture of life, so as to avoid completely, you see, this is where I'm not clear on the detail, the (brief pause for silent thinking), I wasn't clear exactly how it went.

*Son but n'est point de nous raconter une histoire, de nous amuser et de nous attendrir, mais de nous forcer à penser, à comprendre le sens profond et caché des événements.*

O.K. so, basically, his job isn't to amuse us or entertain us, whatever, but to make us think about the hidden meanings of life.

*A force d'avoir vu et médité, il regarde l'univers, les choses, les faits et les hommes d'une certaine façon qui lui est propre et qui résulte de l'ensemble de ses observations réfléchies.*

Um, there was something about 'd'avoir vu et médité', something like that, but I wasn't sure what that meant, but it goes on to say that like, he looks at everything in, in, like identifies who is, like, the end part is the idea of reflection, the idea of giving his reflections on these, but also I think there's the idea that um, who is being described, that they are, like who, who, well it could be who he thinks is, or who, who he thinks is, not a good example but, yah, I'm having a hard time describing in detail what, the impression I have of what this passage means or being specific about it, but that is um, like basically that maybe that he's looking for archetypes, maybe that's the best way of describing it, but I'm not sure if that thought is there or not, maybe it's just the idea of examples of life not of people, that are universal.

As she proceeded through the last segments of this text, Helen experienced more difficulties clearly verbalizing the different interpretations which she was considering for those secondary details which she had not been able to relay with precision in her earlier report.

Given the relative difficulty of the text, mental fatigue most likely explains this sudden impoverishment in her protocols.

*C'est cette vision personnelle du monde qu'il cherche à nous communiquer en la reproduisant dans un livre. Pour nous émouvoir, comme il l'a été lui-même par le spectacle de la vie, il doit la reproduire devant nos yeux avec une scrupuleuse ressemblance.*

O.K. so, it's his, it's his, idea of the world that he wants to communicate to us. He wants to reproduce it in a book, by, by giving a scrupulous description of what it is that he sees.

*Il devra donc composer son oeuvre d'une manière si adroite, si dissimulée, et d'apparence si simple, qu'il soit impossible d'en apercevoir et d'en indiquer le plan, de découvrir ses intentions.*

That's the idea that, like, it has to be very straightforward, very simple, but um (brief pause for silent thinking) that it's impo..., that's where I wasn't sure: if it's important to see, what his intentions are, or that it's important that it not be evident, his intentions?, yah, cause I kind of got that negation but I wasn't sure.

To sum up, the examination of Helen's report in the final listening task reveals – as we similarly observed in her beginning-of-study think-aloud protocols – that this high-proficiency student was able to reach a high level of accurate comprehension of almost all

essential points in a difficult aural text. In our earlier examination of Helen's beginning-of-study think-aloud report, we had noted that her strong lexical knowledge appeared to have played a crucial facilitative role in her comprehension. Interestingly however, in the case of this final listening task, Helen's keen metacognitive awareness, self-regulatory abilities, and her correspondingly judicious strategy use clearly emerged as having played at least equally crucial roles in her comprehension as did her lexical knowledge.

Another interesting finding to emerge from the examination of this higher proficiency student's protocols is that they reveal remaining weaknesses in the student's listening comprehension, and they point to some of their sources. These weaknesses include incompleteness and errors in understanding at the micro-context level resulting from, among other factors, lingering difficulties in perceiving or distinguishing an affirmation from a negative statement at higher levels of listening difficulty in French, particularly when the content contradicts the L2 listener's expectations, a problem which Helen reported also in the stimulated recalls on the questionnaire (see, for example, her stimulated recall protocols for questionnaire items 11 or 27, in section 4.1.2).

We conclude this analysis of higher proficiency students' end-of-study think-aloud data with the presentation of Nick's concurrent protocols in the final listening task.

#### **4.2.4.2 Examination of Nick's end-of-study think-aloud data**

Nick's beginning-of-study think-aloud data attested to high levels of metacognitive awareness and self-regulation as well as judicious strategy use. However, it also revealed that

his lexical knowledge in French was not as extensive as Helen's, and that this weaker vocabulary base had hindered his ability to reach as accurate and detailed a level of comprehension as had Helen. Nick's report of his processing and comprehension in the final think-aloud task confirms these earlier findings.

Nick conducted his end-of-study think-aloud reporting following the schedule which had been planned by the researcher. Here is his complete concurrent think-aloud report in the first listen:

*Le romancier qui transforme la réalité constante, brutale et déplaisante, pour en tirer une aventure exceptionnelle et séduisante, doit, sans souci exagéré de la vraisemblance, manipuler les événements à son gré, les préparer et les arranger pour plaire au lecteur, l'émouvoir ou l'attendrir.*

Um, 'romancier', um, is this a book?, um, it's talking about the good and the bad sort of thing, cause there is the 'brutale' et un autre mot, it was almost like getting people ready for the good and the bad of, of, of a book or of, 'roman', 'romance', 'romancier'?, I'm not sure what that means, um, Oh god, no, I'm sorry, it's not coming.

Researcher: What are you thinking right now?

Nick: Well, it's something about telling either a story or about, you know, a portrait of something, of the good and the bad of getting people ready for, for hearing the good and the bad of, of a story, oh, I wish I could hear it again.

Researcher: Well, you will, hear it again, so, don't worry about it.

Nick: O.K., let's keep going I guess.

From the outset, like the three other students whose end-of-study think-aloud data was previously examined, Nick tried to focus his efforts and attention on the identification of the topic of the aural text. His lack of familiarity with a number of lexical items within the opening lines of the passage delayed his processing of the first segment, and appears to have partly hindered his concentration on the listening task. A slight nervousness is also still apparent in Nick's protocols. Nevertheless, from this very early stage, he correctly grasped the fact that the text referred to "telling a story" or drew "a portrait of something".

*Le plan de son roman n'est qu'une série de combinaisons ingénieuses conduisant avec adresse au dénouement.*

'Romancier', 'roman', 'roman' is a book, um. 'Conduisant', driving, (brief pause for silent thinking). This is either about a book, a specific book, or about writing (pronounced with emphasis) a book, or about telling a story, um, different ways (both previous words pronounced with emphasis), yes, different ways. Right. "Romancier", 'romance', 'roman' I know is a book, and there was 'lecture' (sic), you know, reading, and just, throughout, I think, it's been about messages I think, and thinking about things and ways of conveying thoughts, and ideas, and so, it's all coming together that way.

Nick's protocols reveal that – once again, like Emma, John and Helen – this student proceeded immediately to verify that the text referred to what he had assumed, by evaluating the congruency of the secondary details which he understood with his general framework. However, Nick's report also shows evidence of an excessive focus on individual words, as illustrated by the processing attention which he devoted to the understanding of the – admittedly keyword – 'romancier'. It is extremely puzzling that, although the student reported, from the outset, knowing that 'roman' was 'a book', he was not able to immediately deduce that the suffix *ier* simply marked the *agent*: the book *writer*. This is puzzling because, in French, occupational nouns commonly end with the suffix *ier* (e.g.: pâtissier, menuisier, charpentier). Therefore, one would expect that this frequently occurring pattern would have been noticed by the student, and would thus have been immediately recognized. Moreover, a number of occupational nouns in English follow the *ier* suffix formation rule (e.g.: cashier). In addition, a number of *ier* suffixed occupational nouns borrowed from French are commonly used in English (e.g. financier), not to mention the number of occupational names in English sharing a similar *sounding* suffix (e.g.: engineer). Surprisingly, Helen also processed the word 'romancier' for some time before she was successful in deriving its meaning of *novelist* from her knowledge that a 'roman' was a novel.

*Les incidents sont disposés et gradués vers le point culminant et l'effet de la fin, qui est un événement capital et décisif, satisfaisant toutes les curiosités éveillées au début, mettant une barrière à l'intérêt, et terminant si complètement l'histoire racontée qu'on ne désire plus savoir ce que deviendront, le lendemain, les personnages les plus attachants.*

It's talking about the culminating event, in a book, and thinking about it, and wondering about it the next day sort of, I guess I think reflecting on what has been written about, on what is being said in the book, I think maybe that is the tell-tale of a good book, that you're thinking about it, maybe, reflecting on it, not sure.

*Le romancier, au contraire, qui prétend nous donner une image exacte de la vie, doit éviter avec soin tout enchaînement d'événements qui paraîtrait exceptionnel.*

Still sort of a book, but that was a little bit different, cause I think that was sort of talking about a situation where you are describing the accurate (pronounced with emphasis) detail of somebody's life, the events, of somebody's life, it's a different, it's a different kind of either book or, um. It almost implies that it's different, so I don't know if she's comparing two different types of books, um, maybe she is, maybe that's what's coming now, I don't know, that's all I can say.

Nick's report reveals that he continued to experience difficulty processing this relatively difficult text. Nevertheless, he grasped the essential point that a comparison was made between two types of books. Given the limits of his lexical knowledge and the complexity and abstractness of the content of the passage, it is interesting to note that Nick sustained a strategically sophisticated approach to the arduous listening task. In particular, he used elaborations and inferences with caution and flexibility, weighing the probability of their accuracy against the elements previously heard, and remaining open to alternative interpretations until additional information in the text could enable him to verify these assumptions more assuredly.

*Son but n'est point de nous raconter une histoire, de nous amuser et de nous attendrir, mais de nous forcer à penser, à comprendre le sens profond et caché des événements.*

Forcing you to, to know sort of all the details, of what you've heard, of what you've read. Um I think maybe this is juxtaposed to a situation where maybe you have to think about something. This (pronounced with emphasis) is sort of a story where you know all the details and there's nothing hidden, um, it's all sort of there on the table, so, it's a bit different. I'm thinking she's talking about two different types of things, two different types of stories.

*A force d'avoir vu et médité, il regarde l'univers, les choses, les faits et les hommes d'une certaine façon qui lui est propre et qui résulte de l'ensemble de ses observations réfléchies.*

Ooh... (sigh suggesting Nick found this segment particularly difficult). Something about perfecting our observations, um, (similar sigh), no, I didn't, I didn't catch it.

*C'est cette vision personnelle du monde qu'il cherche à nous communiquer en la reproduisant dans un livre.*

That kind of methodology, or that way of thinking about life, it's that way of thinking about the world, that is I think conveyed in that way of writing, in that type of writing, that type of story.

*Pour nous émouvoir, comme il l'a été lui-même par le spectacle de la vie, il doit la reproduire devant nos yeux avec une scrupuleuse ressemblance.*

And you have to be very scrupulous about transmitting the, real image, the real sort of portrait of what, of what is happening. 'scrupuleuse', yah, 'scrupulous'. O.K.

Again, although he is proceeding with difficulty and that his comprehension is very incomplete, Nick is nevertheless continuing to pick up and to fit in more and more pieces of the puzzle. In so doing, he still appears to be proceeding cautiously, verifying for example his perception or interpretation of 'scrupuleuse' in the above segment.

*Il devra donc composer son oeuvre d'une manière si adroite, si dissimulée, et d'apparence si simple, qu'il soit impossible d'en apercevoir et d'en indiquer le plan, de découvrir ses intentions.*

It's another way of discovering the intention, um, I think it's the methodology, to determine the intention of the writer, of the author, of what is being said, but I'm not, I'm not, I didn't get some of that. I didn't get it. I'm not sure.

Nick immediately proceeded from the first to the final listen providing the following report:

*Le romancier qui transforme la réalité constante, brutale et déplaisante, pour en tirer une aventure exceptionnelle et séduisante, doit, sans souci exagéré de la vraisemblance, manipuler les événements à son gré, les préparer et les arranger pour plaire au lecteur, l'émouvoir ou l'attendrir.*

Yes, this is the way in which the writer gets one to sort of be part of the book, to gain their attention, I think, by, either the good or the bad, depending on the type of story, it is the way in which one gains the attention of the reader, the 'lecteur', the reader.

*Le plan de son roman n'est qu'une série de combinaisons ingénieuses conduisant avec adresse au dénouement.*

Um, 'adresse' and 'dément' (sic) or something?, je n'ai aucune idée, non, je n'ai aucune idée.

*Les incidents sont disposés et gradués vers le point culminant et l'effet de la fin, qui est un événement capital et décisif, satisfaisant toutes les curiosités éveillées au début, mettant une barrière à l'intérêt, et terminant si complètement l'histoire racontée qu'on ne désire plus savoir ce que deviendront, le lendemain, les personnages les plus attachants.*

Yah, it's the culminating event, again, it's sort of, I don't know, drawing to your attention that the, the culminating event and getting there, and 'le lendemain' speaking about it the next day, I think it's sort of, I'm getting the impression that it's sort of, the way in which one writes a good book, you know, by waiting til the very end, like, building up all the detail and then, the culminating event, you know, that you sort of have to wait until the end of the story to get what's really happening. And that that's the sign of a good book, building, and building and building.

*Le romancier, au contraire, qui prétend nous donner une image exacte de la vie, doit éviter avec soin tout enchaînement d'événements qui paraîtrait exceptionnel.*

O.K. This 'romancier' must avoid, all of the detail, must avoid? or actually must give?, no, 'éviter', 'éviter' is avoid, um. Oh boy! Avoid the detail?, or give the detail?, it's different, this (pronounced with emphasis) 'romancier', and I'm struggling with the exact difference between that and the other. The other is more abstract, and this is more detailed. But I'm not sure why that is, the difference in the stories, and 'romancier', oh!, I shouldn't be so stuck on that word, but I am.

In the above protocols, an interesting further testimony to Nick's high metacognitive awareness is his clear consciousness of the amount of attention and processing time which he fruitlessly and imprudently devoted to the understanding of the word 'romancier'. Another interesting insight from Nick's report is his difficulty, in the above segment, in distinguishing whether an affirmative or a negative statement was made, a serious perceptual problem identical to that which we saw in Helen's report of comprehension. Nick's report also offers valuable insights into the complex multiprocessing which must be performed by L2 listeners, even at intermediate-advanced levels of proficiency. In the span of the very few seconds of listening corresponding to the two lines above, (1) on the one hand, Nick processed the segment heard with close attention at the lexical level, (2) he questioned his lexical understanding of specific elements within that segment, noticed an apparent error, returned to verify his original perception, and attempted to reach the correct interpretation; however, likely aware that time would not allow him to reflect further on whether he had just heard an

affirmation or a negation, he (3) assessed his overall level of comprehension of this segment; having, on the other hand (4) confirmed his earlier assumption that a comparison between two styles of books was made, he then (5) came to the realization that the precise differences between the two styles of writing still escaped him, and thus (6) proceeded to recall, and compare and contrast his understanding of the information heard within the first and second parts of the text, while seemingly all the while (7) still trying to find the exact meaning in English of the key word 'romancier', even though he was (8) perfectly conscious, to the point of vexation, that he had been devoting excessive attention and time to the processing of that single word.

This example of the complex multi-processing entailed in L2 listening comprehension highlights the intricate interrelationships which exist among (1) L2 lexical knowledge, (2) phonological skills, (3) metacognitive awareness, (4) self-regulatory abilities, (5) strategy knowledge and use, and the level of accuracy and completeness attained in L2 listening comprehension. All think-aloud data in this study suggest that each of the five factors previously cited exerts a crucial influence on the level of L2 listening comprehension attained, and that adequate strength in each of these five domains is necessary for L2 listeners to come to an appropriately accurate and complete understanding of an aural text presenting a level of difficulty equivalent or slightly superior to their general L2 proficiency level.

*Son but n'est point de nous raconter une histoire, de nous amuser et de nous attendrir, mais de nous forcer à penser, à comprendre le sens profond et caché des événements.*

Forcing us to think about the, about the set, about the story and, um, so yah, again, it's that sort of sense of, the difference between a bad movie and a good movie. A good movie is one that requires you to think, reflect, and it's the same with a book. A good book is one that requires you to think, to reflect about it, before you, before you, without it being spoon-fed, I guess is a good way of putting it.

*A force d'avoir vu et médité, il regarde l'univers, les choses, les faits et les hommes d'une certaine façon qui lui est propre et qui résulte de l'ensemble de ses observations réfléchies.*

Again, it's this idea of forcing you to think about things, to reflect. Um. O.K. I didn't get it all, but it's along, it's the same theme.

*C'est cette vision personnelle du monde qu'il cherche à nous communiquer en la reproduisant dans un livre. Pour nous émouvoir, comme il l'a été lui-même par le spectacle de la vie, il doit la reproduire devant nos yeux avec une scrupuleuse ressemblance.*

This style is, is transmitting your (pronounced with emphasis) image of what life is all about, these details, to somebody else, to the readers. Yah, that's sort of the aim, the exercise in this one is: to be able to transmit, to relay the details of your own (pronounced with emphasis) life, to, the world. *Il devra donc composer son oeuvre d'une manière si adroite, si dissimulée, et d'apparence si simple, qu'il soit impossible d'en apercevoir et d'en indiquer le plan, de découvrir ses intentions.*

Yah, to discover the intentions, um, (sigh), need to discover the intentions of what?, of what the author is trying to say?, or of what is being written about?, um, I'm not sure, not sure, not sure.

Researcher: What are you thinking about?

Nick: Well, overall, what I'm trying to say, I may be way off base, but I'm trying to say that this is a story about conveying, about an author conveying his or her thoughts to the reader. And the way in which, um, the author is trying to do that. That there's a difference between giving a blow-by-blow detailed approach of some, of an event, as opposed to making the reader think about what is being said. And that there's a difference in that, there's a difference in the two approaches: reflecting on something as opposed to just being spoon-fed something and that there's a difference between that, in the approaches to writing.

Researcher: What made you say that there was an apposition being made?

Nick: Because I think at one point, she's talking about, not necessarily 'par contre' or 'd'autre part', but maybe she used words similar to that, and they got me, and she repeated 'le romancier', so I really thought, I really thought that there must be a comparison being made between two different persons or two different styles, of 'romancier'.

Researcher: Thank you. Is there anything else you'd like to add?

Nick: No, I mean, the only thing I can add is that I know it's the old story, toujours la même histoire: I listen and I keep on getting more, and if I could listen more, I'd probably keep on picking up more, you know what I mean? I'm a little stressed right now, too, because of my exam.

Before the start of the think-aloud session, Nick explained that he was expecting important exam results later that day, and that he had consequently felt stressed and less able to concentrate on tasks that particular day. At the end of this think-aloud, Nick again expressed feeling that the anxiety of not knowing whether he had been successful in his exams may

have affected his performance in this final listening task. This is unquestionably a possibility. Nevertheless, it is important to remember that the think-aloud tasks selected for both groups were at a level slightly above their general proficiency level at the time; it is indeed unlikely that the same level of detail in the students' accounts of processing could otherwise have been elicited. The tasks selected reached their primary goals of documenting the students' metacognitive awareness, self-regulation, and strategy use. It would be unreasonable, however, to expect that the students could have reached perfect levels of comprehension in these think-aloud tasks.

As in his first think-aloud report, Nick's end-of-study think-aloud protocols illustrate high levels of metacognitive awareness and self-regulation, and judicious strategy use. However, as in his first think-aloud report, it also reveals that his lexical knowledge in French was not as extensive as Helen's. This weaker vocabulary base clearly hindered his processing and his ability to reach as accurate and detailed a level of comprehension of this final listening task as was attained by Helen. Although Nick accurately understood the central point in the text that a comparison was being made between two forms of writing, he was not able to reach a high level of accuracy and precision in his further description of these two styles. Nick's end-of-study report reveals also that his incomplete comprehension was partly the result of weaknesses in his *linguistic / strategic* metacognitive knowledge which played a negative role in his linguistic processing and resulting comprehension in the final listening task. These weaknesses include insufficient use of L1 knowledge in the interpretation of similarly formed L2 lexical items, and perceptual difficulties differentiating affirmative from negative statements in French.

Although space limitations do not allow the presentation of the data from Ann, the other participant in the HP group, it should be noted that her end-of-study think-aloud data revealed very similar lexical knowledge, metacognitive knowledge, self-regulation, strategy use, and comprehension, in this final listening task, as was exhibited by Helen.

#### **4.2.5 Summary of findings from the think-aloud protocols**

In the case of the low-proficiency group, the think-aloud protocols provide evidence of a considerable improvement in the students' metacognitive awareness, self-regulatory abilities, strategy use, and in the level of comprehension which they attained in L2 listening over the course of the study. These improvements include (1) a greater use of general knowledge and logic, (2) diminished use of word-to-word 'surfing' and translation, and (3) enhanced ability to identify the key words and context, resulting in (4) enhanced attention and memory capabilities, allowing for (5) a considerably increased use of comprehension monitoring, evaluation and correction, leading to (6) a correspondingly diminished use of unverified translations, inferences, and elaborations, and (7) a correspondingly greater accuracy and greater completeness in comprehension. The think-aloud data provide evidence of a clear evolution, in the linguistic processing conducted by the students in the low-proficiency group, over the course of the study, from a base word level approach to an approach, and a level of success in listening comprehension, far more closely resembling that of the students in the high-proficiency group. It is interesting to note also that very similar deficiencies in linguistic processing and listening comprehension can be observed at the beginning of the study, and very similar improvements in metacognitive knowledge, self-regulatory abilities,

linguistic processing, strategy use, and listening comprehension can be observed, at the end of the study, across the sample of low-proficiency students.

The think-aloud reports in the high-proficiency group reveal that, from the beginning of the study, the students in that particular group exhibited high levels of metacognitive knowledge, strong self-regulatory abilities, strong to very strong lexical knowledge, judicious strategy use, and that they attained relatively high to very high levels of comprehension in L2 listening. In all likelihood owing largely to these facts, improvements in their processing and comprehension are not clearly apparent from their think-aloud protocols.

In answer to the second research question, the think-aloud data provide valuable insights into some of the sources of L2 listening comprehension difficulties in the case of low- as well as high-proficiency learners. Across the two groups in this study, *L2 lexical knowledge* clearly emerged as the most influential factor in the level of completeness and accuracy attained in L2 listening comprehension. Although a high level of metacognitive awareness, self-regulation, and judicious strategy use proved to be *necessary conditions* for success in L2 listening comprehension, they did not appear to be *sufficient conditions* for success in L2 listening comprehension unless the linguistic processing was supported by sufficient L2 lexical knowledge. This finding carries important implications because, across the two groups in this study, weaknesses were evident in the students' knowledge and/or utilization of the various resources which can be invoked to solve problems resulting from a lack of understanding of individual lexical items. In particular, the think-aloud data – which are consistent with the researcher's observation data – revealed insufficient awareness or use of the contribution that the L1 can bring to the understanding of the L2 in the case of closely

related languages (as was the case in this study). The think-aloud – and observation – data also revealed a crippling inflexibility, among the low-proficiency students, at the beginning of the study, to mentally sound out, write out, and otherwise manipulate ill-perceived L2 sounds, even in cases when the students strongly suspected that they had misheard / misunderstood a key lexical item. The think-aloud data in this study clearly illustrate that this handicap can have devastating effects on students' comprehension, particularly in light of the prevalence of perceptual difficulties at low levels of proficiency, a problem which, the think-aloud – and observation – data also revealed, can linger on into the intermediate-advanced proficiency level.

The think-aloud data further suggest that the fact that the low-proficiency students reported levels of metacognitive awareness which were very similar to those reported by the high-proficiency students – even at the beginning of the study (when the low-proficiency students' think-alouds in fact largely demonstrated poor metacognitive knowledge being applied) – may be explained by the fact that the absence of evidence of metacognitive knowledge in a L2 listening comprehension task does not preclude its existence, because *possessing* metacognitive knowledge does not appear to be a sufficient condition for the L2 listener to be able to successfully *apply* this knowledge in a L2 listening task.

The think-aloud data in this study suggest that, even applied, metacognitive knowledge can result in very different levels of completeness and accuracy in comprehension, depending, among other factors, on the L2 listener's *judiciousness in strategy use*. For example, the think-aloud data provide supporting evidence of the similar levels of inferencing and elaboration reported in the numerical questionnaire data by both low- and high-proficiency

students. Crucially however, the think-alouds revealed that inferencing and elaboration frequently led to errors in comprehension among low-proficiency students, because these were not – at the beginning of the study – subjected to rigorous or systematic verifications, in spite of the fact that the shaky foundations in those students' L2 lexical knowledge made such verifications indispensable. In a sharp contrast, the think-aloud data demonstrated that the higher proficiency students verified their inferences and elaborations far more rigorously and systematically, in spite of the fact that, conversely, their relatively strong lexical knowledge made this verification process less necessary than it is at lower levels of L2 proficiency and lexical knowledge.

The think-aloud data in this study suggest that, in the complex multi-processing entailed in L2 listening comprehension, intricate interrelationships continuously occur among (1) L2 lexical knowledge, (2) phonological skills, (3) metacognitive awareness, (4) self-regulatory abilities, and (5) strategy knowledge and use, which can have fundamental effects on the level of accuracy and completeness attained in L2 listening comprehension. These data further suggest that adequate strength in each of these five domains is necessary for listeners to reach high levels of accuracy and completeness in their understanding of L2 texts at a level of difficulty equivalent or slightly superior to their general L2 proficiency level.

Following is a summary of the characteristics (including components of metacognitive, self-regulatory and strategic knowledge) noted by the researcher to have beneficially influenced the students' listening comprehension in the beginning- and end-of-study think-aloud tasks.

Components of self-regulation (presuming coexistent, applied metacognitive knowledge and strategic knowledge) noted to have beneficially influenced the students' listening comprehension:

- Determination and perseverance;
- Awareness and control of nervousness or anxiety;
- Awareness and control of attention, in particular: ability to resist focusing excessively on ambiguous segments while the aural message unfolds, to remain focused even if the comprehension of the aural message presents a high level of difficulty, and to sustain concentration from the very beginning to the very end of the message;
- Awareness and control of individual characteristics which can negatively influence listening comprehension (such as severe perceptual difficulties, or a tendency to impulsivity in judgments and interpretations) through the use of compensatory strategies such as increased monitoring, self-questioning and evaluation;
- Awareness of working memory limitations, and use of compensatory strategies such as note-taking or increased visualization as warranted; and,
- Ability to follow the comprehension objectives set.

Components of metacognitive knowledge (presuming coexistent, applied strategic knowledge and self-regulation) noted to have beneficially influenced the students' listening comprehension:

- Ability to gauge the relative difficulty posed by a listening task;
- Ability to gauge the appropriate approach and strategies most susceptible to lead to success in comprehension; and,
- Ability to assess the degree of completeness / precision which one can reasonably set as a comprehension objective, based, in particular, on one's awareness of one's L2 listening proficiency level, one's general knowledge of the subject of the aural text, and the relative difficulty correspondingly presented by the comprehension of the aural message.

Components of strategic knowledge (presuming coexistent, applied metacognitive knowledge and self-regulation) noted to have beneficially influenced the students' listening comprehension:

- Ability to accurately identify the key words / topic / context;

- Ability to ignore secondary details when warranted by one's L2 listening proficiency level, and/or general knowledge, and/or the relative difficulty presented by the comprehension of the aural message;
- Ability to retain the speech stream in working memory;
- Ability to retain prior as well as on-going reasoning and interpretations in working memory;
- Systematic manipulation of indistinct or counter-intuitive L2 sounds or words;
- Recollection of prior listening experiences in aid to comprehension;
- Use (with appropriate caution) of inferencing and/or elaboration based on linguistic and/or contextual clues, and/or general knowledge, and/or logical analytical reasoning;
- Systematic verification of inferences and/or elaborations based on additional linguistic and/or contextual clues, and/or general knowledge, and/or logical analytical reasoning;
- Systematic monitoring, self-questioning, and evaluation of comprehension based on all pertinent linguistic and other sources of knowledge available, and logical analytical reasoning;
- Systematic evaluation of on-going interpretations and hypotheses based on prior interpretations and hypotheses, and on prior parts of the speech stream retained in working memory;
- Flexibility to consider interpretations which may appear counter-intuitive if a counter-intuitive meaning has been appropriately confirmed by adequate L2 lexical knowledge; and,
- Retrospective evaluations of the levels of comprehension attained in L2 listening, for the remedial purpose of identifying the principal factors influencing one's achievement in L2 listening comprehension

Individual listener characteristics noted to have beneficially influenced the students' listening comprehension:

- Accuracy and automatization in L2 phonological skills;
- L2 lexical knowledge;
- L1 lexical knowledge;
- General knowledge;
- Logical analytical reasoning skills; and,
- Prior L2 learning and listening exposure.

The think-aloud data in this study suggest that weaknesses in these major components of metacognitive knowledge, self-regulation, strategy knowledge, or individual characteristics

listed above can have negative effects on other components or characteristics and, in a chain of interrelated consequences, on the level of comprehension attained in L2 listening. The students provided numerous examples of such chains of consequences in their stimulated recalls on the questionnaire (see, for example, John's stimulated recall protocols on item 15, in section 4.1.1, or on item 39, section 4.1.3; or see Helen's stimulated recall protocols on item 27, in section 4.1.2, or on item 38, section 4.1.3).

The think-aloud data in this study also suggest that, among those individual characteristics listed above (which, strictly speaking, are unrelated to metacognitive, self-regulatory, or strategic knowledge), two factors in particular can be the cause of serious difficulties and break-downs in – high- as well as low-proficiency – students' listening comprehension:

- Weaknesses in L2 phonological skills; and,
- Weaknesses in L2 lexical knowledge.

In this study, these two factors were the ones observed to most frequently and most fundamentally hinder – in a chain of interrelated consequences – students' attentional capabilities, memory capabilities, their capability to deploy their metacognitive knowledge, their capability to apply their self-regulatory skills, their capability to apply strategies judiciously and, ultimately, their comprehension of L2 aural texts, as was clearly exemplified by Emma's beginning-of-study think-aloud protocols.

### **4.3 Results from the student summative reports**

#### **4.3.0 Introduction**

In answer, more specifically, to the third research question – as well as to the first research question – the following section presents a summary of the responses provided by the L2 participants in the LP and HP groups – and L3 students in the HP group – in the 23 question end-of-study summative reports (see Appendix G) evaluating the self-regulatory listening method investigated in this study.

The presentation of the students' summative report results is organized into two sections. The first presents students' responses to the items pertaining to the first research question examined in this study. The second section presents the learners' responses to those items which pertain to the third research question investigated in this research.

#### **4.3.1. Summary of students' perceptions concerning the effects of a self-regulatory approach to listening comprehension development on their metacognitive awareness, regulatory abilities, strategy use, and overall success in listening comprehension**

Following are detailed summaries of the answers provided by the students in response to the items pertaining more specifically to the first research question investigated in this study.

The students' summative report questions 1 and 2 were:

1. To what extent have the listening exercises enabled you to become more aware of the diversity of factors which influence listening comprehension in French?
2. If applicable, could you cite factors whose importance you have come to re-evaluate, in the course of the listening training?

Overall, the students reported that the listening exercises had enabled them to become more aware of the diversity of factors which influence listening comprehension in French, and they were all able to cite various factors whose importance they had come to reevaluate in the course of the listening training. The students' comments included:

I am now more aware of the fact that I tend to lose my concentration when the speakers speak quickly or the text is very complicated, I am more aware that the better the structure of the text, the better I understand or can anticipate what is going to be said next, and I realize of course my vocabulary is limited, but when I listen to phrases etc., I now realize I do not have to understand every word to comprehend the topic, etc., and I'm more aware that I have a better chance to understand the text if I know something about the topic – to fill in gaps etc. from my own experiences. (Peter, LP group)

I have learned to re-evaluate my initial understanding more. (Helen, HP group)

Je suis beaucoup plus consciente des différents aspects de la langue orale. The listening exercises forced me to habituate myself with different accents and different speeds of speech. Also, I became more aware of secondary factors such as vocabulary, subject, etc. (Lina, L3 HP student)

The repetition of the exercises allowed me to better understand the ways I learn + understand. (Sita, L3 HP student)

The summative report question 3 was:

3. Which specific factors do you consider exert a particularly strong influence on your listening comprehension in French?

In answer to this third report question, the students were able to cite many examples of factors which they viewed as exerting a particularly strong influence on their listening comprehension. These included:

knowledge of the subject (cited by all students)

vocabulary knowledge (cited by most students)

background noises and distractions, speaker's enunciation (Ann, HP group, and other students in both the HP and LP groups)

speed of speech, structure of text (Peter, LP group, and other students in both groups)

repetition, word comprehension (John, LP group, and other students in both groups)

being tired, being stressed (Nick, HP group)

accent and rhythm (Helen, HP group)

ability to continue listening in the face of comprehension difficulties (Sita, L3 HP student)

The summative report question 4 was:

4. To what extent did the listening training enable you to gain control over those factors which you consider exert a particularly strong influence on your listening comprehension in French? Please explain.

Overall, the students reported that the listening training had enabled them to gain some control over those factors which they viewed as exerting a particularly strong influence on their listening comprehension, and they were all able to cite examples of increased control.

Their examples included:

I realized early on that if I didn't understand completely the subject it was best to draw your conclusions once the dialogue was finished and take into consideration the conversation as a whole. If I decided early on the subject matter was X and then I was wrong I would have missed all the other important clues along the way. (Emma, LP group)

To a good extent. By wanting to understand and to be better understood I have listened to more French from various mediums and compared them to English (i.e. CBC news) to determine overall comprehension. (John, LP group)

By listening to the text three times I could eventually distinguish almost all the words despite having problems with the speaker's enunciation or background noises. With repetition, I could eventually guess the meaning of unknown words and test the meaning. (Ann, HP group)

I ensure that, in the event that I am tired or stressed, I focus more. In the event that I do not know the subject matter, I try to grasp the general sense before trying to grasp the details. (Nick, HP group)

To a certain extent I can control these factors better although there is room for improvement. Now, I adopt the following strategies (particularly for unfamiliar subjects): listen carefully to the introduction in order to know the subject and issue to be discussed, pick up words I know and fill in the meaning for words I don't know based on context and the issue. (Sita, L3 HP student)

As the exercises progressed I could develop the creation of images better, it became subconscious as opposed to planned + in this way I could retain the story better than had I just taken notes. (Lina, L3 HP student)

The summative report questions 5 and 6 were:

5. To what extent have the listening exercises enabled you to more comprehensively or more accurately assess your strengths and needs in French listening comprehension?
6. If applicable, could you explain which of your personal strengths or needs you have come to reassess in the course of the listening training?

In the case of report item 5, the students' summative report responses were less positive: The students' assessment of the extent to which the exercises had enabled them to more comprehensively or more accurately assess their strengths and needs in French listening comprehension was relatively low. Nevertheless, in a clear contradiction to their answers for item 5, the students were all able to cite examples of personal strengths or needs which they had come to reassess in the course of the listening training in their responses to report question 6.

Students' examples of personal strengths or needs which they had come to reassess in the course of the listening training included:

1. I need to improve my concentration on texts, 2. In general, I need to expand my vocabulary + my ability to understand words that I know but are spoken quickly and others I fail to understand quickly. b/c when I read a text after I realize this. (Peter, LP group)

My lack of attention to detail was evident in the listening training however this is something I have struggled with throughout my French training. (Emma, LP group)

Word comprehension. By no longer focusing on specific words and mentally causing a pause in my listening I have moved forward and better grasp a broader awareness of total text. (John, LP group)

I know my short term memory is unreliable, but it is apparent that without notes or text to refer to, I wouldn't be able to precis what I've listened to. (Helen, HP group)

I realize the importance of expanding my vocabulary. As well, I realize I need to be less stressed when I am listening. En d'autre mots, I must not be concerned about failing. (Nick, HP group)

vocabulary – I have realized I can understand better with a wider vocabulary which I am trying to get now. (Lina, L3 HP student)

When I don't understand fully what is being said to me, I have a tendency to "wander off" and lose my attention. Because of these listening exercises, I realize how much of a setback this is for me, and how vital it is to my oral comprehension. (Raj, L3 HP student)

The way I listen + form visual pictures. I somewhat used this tool beforehand but the exercises allowed me to use it towards listening + in a more thought out logical step by step approach. (Sita, L3 HP student).

The summative report question 7 was:

7. Over the course of the listening training, would you say that your confidence in your abilities for French listening comprehension decreased, remained relatively similar, or increased? Please justify your answer.

Overall, the students reported that, over the course of the listening training, their confidence in their abilities for French listening comprehension had remained stable or had increased (the latter, in the majority of cases), and they were able to explain what had brought about the perceived increases. The students' explanations included:

I think it has increased as I have a better comprehension of what other students say and what is said on the radio. I also am now able to find errors that I make + others make. (Peter, LP group)

Increased. By repeating the listening exercise I found that I usually had enough vocabulary to understand the details of a message. I found that I translated in my head less and less and that I could "stay on top" of the message more easily. I have found that I can now comprehend radio broadcasts more easily, despite only hearing the message only once. (Ann, HP group)

I think it is relatively similar, slightly increased because I have learned a lot of vocabulary that I built in to my listening and comprehension. (Julie, LP group)

Perhaps decreased. I have a good general understanding of what I hear, but did not realize how much I don't hear or how much I put aside as unimportant to skip to more important points. (Helen, HP group)

Absolutely increased! Over time, I was able to absorb more and more by working on those issues described above. (Nick, HP group)

It increased. I was impressed with the detail I was able to draw from a story by the 3<sup>rd</sup> listen. However I also find it difficult to transfer this exercise + some of the lessons learned to real life given I don't re-listen to the same thing 3 times. (Sita, L3 HP student).

The summative report question 8 was:

8. Generally speaking, over the course of the listening training, would you say that the relative difficulty presented for you by listening comprehension in French decreased, remained relatively similar, or increased?  
Once again, please justify your answer if possible.

In this one instance, students' answers across the sample of seven L2 participants and three L3 students showed variation in responses: There is variation in the students' assessment of the extent to which the relative difficulty presented for them by listening comprehension in French decreased, remained relatively similar, or increased, over the course of the listening training. As explained by a number of the students, this is most likely due to the fact that listening tasks at increasingly challenging levels of difficulty were presented in the class exercises, particularly in the HP group.

The summative report question 9 was:

9. Over the course of the listening training, would you say that your interest for listening in French decreased, remained relatively similar, or increased?  
Please explain.

Overall, the students reported that, over the course of the listening training, their interest for listening in French had remained the same or had increased (the latter, in the majority of cases). The explanations provided by the students included:

Increased. Due to the fact of the need to do better. (John, LP group)

As my comprehension increased, my interest increased. But when I find a text particularly difficult to understand, my mind wanders. (Ann, HP group)

Probably increased. It became apparent that I do not understand as much of what is said as I thought – and that is a problem! (Helen, HP group)

Increased etant donné que c'est plus facile maintenant! (Nick, HP group)

Je dirais que mon interet a augmenté à cause de cet exercice. Je me sent plus confiante en moi-même parce que j'étais capable de comprendre la plupart du texte. Ce qui veut dire que je peux le faire autrement aussi soit en regardant la télé soit en écoutant la radio en français. (Lina, L3 HP student).

The summative report question 10 was:

10. To what extent do you consider that the listening exercises have enabled you to make progress in your comprehension of spoken French?  
Please justify your answer.

Overall, the students reported that the listening exercises had enabled them to make some progress in their comprehension of spoken French, and they were able to justify their answers. Their explanations included:

It has helped me think about how I listen. ie. I realize I will not be able to understand every word, therefore, I don't try to "hear" every word or translate every word. I also concentrate harder with respect to listening. (Peter, LP group)

It has because of vocabulary that has been learned and pronunciation. (Julie, LP group)

A gradual process (Emma, LP group)

I feel better equipped to understand what people are saying to me due to this exercise, since for example I am more able to bypass the accent and get to the content of the conversation. (Lina, L3 HP student)

A little because it is forcing me to be attentive and focus on the dialogue. (Raj, L3 HP student).

#### **4.3.2 Summary of students' perceptions and attitudes concerning the various components of the self-regulatory listening approach examined in this study**

Among the items pertaining to the third research question examined in this research, the summative report questions 12 and 21 were:

12. Did the twice-weekly schedule of listening training appear to you: excessive, adequate, or insufficient?
21. Are there other, different complementary activities which you would have liked to have seen incorporated into the listening exercises?

Most students found the twice-weekly schedule of listening training adequate in the intensive language learning context of this study; two students (the two HP group students who exhibited the highest listening proficiency) found it excessive. The students also shared suggestions such as including, in the exercises, news segments from the radio or Internet presenting topics related to their day-to-day activities, adding television news excerpts, or “recorded conversations between two people or a recorded conference or negotiation”, and adding some “listening activities that reflect what is covered in the classroom”.

The summative report question 13 was:

13. The method of listening comprehension development which you experienced in the past few weeks rested upon learner autonomy and self-discovery.

Do you consider that this approach was appropriate and that it enabled you to adequately fulfill your needs, or would you have preferred instead more specific and more explicit pedagogical intervention in the listening comprehension training? Please explain.

Many students found merit in the self-regulatory approach to listening comprehension development investigated in this study; nevertheless, many expressed the wish that they could have benefited from a higher degree of “explicit intervention” from the instructor. The students reported for example that they would have appreciated “direct feedback” on their personal performance (Julie), and that they “would have liked to have received a few strategies or guidelines” (expressed in very similar words by Emma, Ann, Raj, and Sita).

The summative report question 14 was:

14. In the listening training, you were given the opportunity to listen to the aural excerpts three times.

Based upon your personal experience, how would you rate the usefulness of listening to an aural passage a second time?

All students provided highly positive comments concerning the opportunity to listen to the aural texts a second time. Typically, the students explained that – after they had “obtained an overview of the text” in the first listen – the second listen allowed “for confirmation of what had [been] heard”, to get “more of the detail”, gave the possibility “to start filling gaps” and “to interpret from the beginning with the overall story in mind”.

The summative report question 15 was:

15. Based similarly upon your personal experience, how would you rate the usefulness of listening to an aural passage a third time?

The majority of the students across the sample also provided very positive comments concerning the relevance of a third listen to the aural texts. Typically, in this case, the students explained that the third listen further helped them to “fill in gaps” and to “listen for other key words” after their discussion of their comprehension with a partner, that it “gave one more opportunity to confirm the major details” and “an extra chance to try and decipher some details and/or subtleties as well”.

The summative report question 16 was:

16. The purpose of the listening “journals” was two-fold: to document your listening comprehension for research purposes, and to provide you with the opportunity to record your interpretations and thought processes in writing, in the event that this could facilitate your comprehension.

Based upon your personal experience, how would you rate the usefulness of note-taking in French listening comprehension training?

Most students also provided positive comments concerning the use of listening journals in the context of L2/L3 listening exercises. Typically, they explained that “taking limited notes during the listening exercise helped [them] remember the different elements of the text and assisted [them] in identifying the areas [they] needed to concentrate on”. As previously mentioned, several students pointed out nevertheless that note-taking which is excessive or conducted while listening (particularly in the first listen to a relatively difficult text) can interfere with concentration – and consequently with comprehension – in the listening task. It is interesting to note that Raj (L3 HP student) reported that note-taking “became more useful [to him] after a few sessions because [he] started to note some commonalities and trends about [his] learning challenges”, while, conversely, Lina (L3 HP student) reported that she found the journal “useful the first few times but after that [she] saw a pattern in [her] strategy which continued. Therefore, by the end of the session, [she] felt the journals were no longer useful in terms of 1. identifying [and] 2. elaborating listening strategies”. Nick (HP group) reported that he found that concentrating exclusively on the listening was best.

The summative report question 17 was:

17. The listening training provided students with the opportunity to discuss their interpretations of an aural excerpt with a partner after the second listen.

Based, once again, upon your personal experience, how would you rate the usefulness of discussing your interpretation with a partner before the final listen to an aural text in French?

All students provided highly positive comments concerning the opportunity to discuss their comprehension with a partner following the second listen. Typically, the students justified their answers by explaining that these discussions “helped [them] fill in gaps”, “listen for key words that [they were] not aware of / [had] missed / or did not understand”, helped them

remember elements which they had forgotten, helped them compare how effective their listening skills were, and helped them to “pull the whole story together”.

The summative report questions 18 and 19 were:

18. The listening exercises were frequently accompanied by various opportunities for oral expression, reading aloud, vocabulary and grammar analysis, etc.  
Based upon your personal experience, how would you rate the usefulness of accompanying a listening exercise with complementary, related activities?
19. Among the activities which were conducted complementarily to the listening exercises, are there some which you found particularly useful for your specific needs?

All students provided highly positive comments concerning the activities which followed the listens. They explained, for example, that “summarizing was good for practicing French and using the words [they] had heard”, “the vocabulary and grammar analysis was useful”; “debates and discussions resulting from the texts allowed [them] to practice speaking”; they cited that the combined activities had allowed them to learn “new words, expressions”, “more things to learn that can be used for future listening exercises”.

The particular activity unanimously perceived by the students as extremely valuable was the examination of the transcription of the aural texts. The students explained that “reading the text after (read aloud) helped [them] comprehend the words [they had] missed”, because they often missed words, but when they read them, they knew them; similarly, another student explained that “reading the text [allowed her] to see the words and compare them with the pronunciations, especially since in most cases, [this particular student explained that she] knew the words, [but] it was the pronunciation that threw [her] off”. Other students explained that “the opportunity to view the text highlights both the points you did understand

and secondly allows you to see where you missed things”, that “reading the text aloud was useful for identifying difficult vocabulary and grammar”, and that “being able to define certain words and phrases was helpful. It also helped to explain the text a bit more and to paint a clearer picture of it in total. Reading the text was good for comprehension”. A number of students also reported that they had found it particularly “useful when the cassette was replayed with the text in front of [them]”. Some higher proficiency students within the HP group reported having found the sharing of their individual comprehension in the group discussion which followed the third listen less useful, “because everyone pretty much had the same feedback each time”; some of these HP students also found that the individual reading-aloud aided “neither [their] pronunciation nor [their] comprehension”.

The summative report question 22 was:

22. Do you consider that receiving further listening comprehension training would be useful to you in the remainder of your French language training?

All students in the LP group reported that they considered that receiving further listening comprehension training in the remainder of their French language training would have been useful to them; all but one student in the HP group shared similar views, although they suggested certain modifications to sustain their interest and/or to increase the potential benefits which they could derive from further listening training (these suggestions were enumerated earlier in this summary).

The final summative report question was:

23. The level of achievement attained in listening comprehension in a second language - as in any complex cognitive task - can be the result of a multiplicity of factors.

Are there factors other than the listening training which you consider may have contributed to the outcomes of the listening training as you have previously described them here? Please explain in detail if possible.

In answer to this last report question, the students cited a number of factors which they perceived may also have contributed to the enhancement of their listening skills. The LP students cited: regular out-of-classroom exposure to spoken French through French language radio or television, in-class exchanges in French with instructors and classmates, and a drive to succeed and competitive spirit. Students in the HP group cited: the personal command of French vocabulary and grammar, the recent classroom emphasis on oral communication, the degree of out-of-classroom exposure to spoken French through French language radio or television, the “ability to concentrate on the cassette and eliminate outside ‘noise’ ”, and, in the case of a L3 student, “already being able to speak another language [even if] there are no similarities between the languages, [because the knowledge of this prior language eliminates the need] to reference everything to English, [and that] perhaps [...] ears are accustomed to hearing different sounds”.

#### **4.3.3 Summary of findings from the student summative reports**

In answer to the first research question, the seven L2 students in the LP and HP groups and the three L3 students in the HP group consistently provided highly similar responses in their end-of-study summative reports. Overall, these ten students reported that the listening development method investigated in this study:

- enabled them to gain a greater awareness of the diversity of factors which affect L2/L3 listening comprehension;

- enabled them to reassess some of their strengths and needs in French listening comprehension;
- enabled them to gain some control over the factors which they viewed as exerting a particularly strong influence on their listening comprehension in French;
- enabled them to sustain or, in most cases, had resulted in an increase in their confidence in their L2/L3 listening abilities;
- enabled them to sustain or, in most cases, had resulted in an increase in their interest for listening in French; and,
- enabled them to make some progress in their aural comprehension of French.

In answer to the third research question, these ten students again provided highly similar responses in their end-of-study summative reports:

- All students provided highly positive comments concerning the opportunity to listen to L2/L3 aural texts three times consecutively;
- All students provided highly positive comments concerning the opportunity to discuss their comprehension with a classmate following the second of the three listens;
- Most students provided positive comments concerning the utility of listening notebooks within the context of listening exercises; and,
- All students provided highly positive comments concerning the activities which followed the three listens (in particular, concerning the detailed, instructor-directed analysis of the transcriptions of the aural texts).

In sum, overall, in answer to the first and third research questions investigated in this study, the students' feedback was positive concerning all fundamental aspects of the method which were investigated through the detailed 23 item open-ended questionnaire. The students' summative report data indicate that, in both the LP and HP groups and in the case of L2 and L3 students alike, the self-regulatory approach to listening comprehension development examined in this study appears to have contributed to the enhancement of these language learners' metacognitive awareness, strategy use, and self-regulatory abilities in listening comprehension, and that it exerted a positive influence on their interest and motivation for listening in French.

#### **4.4 Results from the student listening note-book data**

##### **4.4.0 Introduction**

At each listening exercise throughout this study, the participants were encouraged to briefly record the steps in their listening comprehension processing, the goals they may have set, and their reflections upon the listening comprehension process, in a personal listening note-book provided by the researcher (see Appendix B). These listening note-books provide valuable explanatory and confirmatory data in answer to the first and third research questions which were examined in this study:

What are the effects of a self-regulatory approach to listening comprehension development on language learners' (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension?

What are language learners' perceptions and attitudes towards a self-regulatory approach to listening comprehension development?

Given the abundance of data collected in this study, the researcher was compelled to limit the presentation of results from this instrument to one particular aspect: Following is a detailed summary of the *types* of listening note-book entries (such as the identification of a specific comprehension problem or selective attention goals) recorded across the participant sample, in each listen, by low- and high-proficiency students. This aspect of the listening note-book data was chosen for analysis because the types of entries recorded by the students provide clear insights into *how* and *why* the pedagogical approach investigated in this study fostered metacognitive awareness, judicious strategy use, and self-regulatory abilities in L2 listening comprehension.

#### **4.4.1 Summary of findings from the analysis of the types of entries recorded in their note-books by low- and high-proficiency students**

Similarities in high- and low-proficiency students' approaches to listening in French can be seen across the three listens conducted as part of the listening training, particularly in the last few weeks of the study:

- The students' listening note-book data reveal that, typically, all students similarly focused at the outset on the identification of key words, and on establishing the subject and context with the help of these keywords and the support of their linguistic and general knowledge.
- Typically, during and/or following the first listen, all students noted some of the words which they thought might be key to the meaning of the text, as well as ambiguities, especially those terms thought to be important to the meaning, but which

were not perceived distinctly, frequently written down in a simplified phonetic representation of the students' phonological recollection of the particular term, accompanied by a question mark. For example, as early as the fourth exercise in his low-proficiency group, Peter's listening note-book entries contain evidence of attention directed at perceptual identification and verification. Among his notes corresponding to the first listen, for instance, Peter wrote:

are shee tec tuare architecture?

need to hear 'cajun' again

je comprends l'histoire, mais Louisiane était établi avant Acadia, so, j'ai besoin plus détails concernant comment Acadien est venu à Louisiane. Il y a des mots que je ne comprends pas bien, des dates etc. Je vais chercher les dates et écouter plus de mots clés pour avoir meillé connaissance.

(literally: I understand the story, but Louisiana was settled before Acadia, so, I need more details concerning how Acadians came to settle in Louisiana. There are words that I do not understand well, dates, etc. I am going to listen for these dates and for more key words to get a better knowledge)

These few notes alone clearly illustrate this low-proficiency student's judicious use of retrospective evaluation of comprehension, verification of comprehension, and directed attention in aid to completing and ascertaining comprehension following problem identification, all attesting to metacognitive awareness and self-directedness in listening.

- As was illustrated in the preceding example, following the first listen, the students typically recorded a general evaluation of their comprehension in the first listen, accompanied by a brief description of the more general or most important processing problem(s) which they had encountered in their first listen to the text, and of the gaps

and/or uncertainties in their comprehension, accompanied sometimes by hypotheses (based on linguistic and/or general knowledge and/or logic) followed by a question mark. The students then proceeded to write down precise goals aimed at confirming and/or supplementing their understanding of the text in the following listen.

Typically, these goals pertained to increasing attention in particular parts of the text, being attentive from the very beginning of the listen, or listening selectively for individual elements which were not perceived clearly and were thought to be important to the meaning of the text and/or which the students thought could help them confirm and/or supplement their first interpretation of the text. Following is an example of goals which Helen (HP group) recorded in her note-book in preparation for a second listen to a text:

Verifier que j'ai compris la grande partie de la 1e partie.

Je manque le 2e pays mentionné.

Je ne peux pas compris ce qu'il a dit.

Je pense que si je conais en avance le pays, je peut le comprendre, mais je ne peut pas compris sans ça.

Ecouter pour l'hollande et vérifier.

(literally: check that I understood the essential parts of the first part. I am missing the second country mentioned. I couldn't understand what he said. I think that if I know the country in advance, I can understand it, but I can't understand it without that. Listen for 'Hollande' and check).

Lina, L3 student in the HP group similarly recorded, in one instance:

Je n'ai pas compris beaucoup, parce que : j'ai manqué le début et aussi je ne savais pas de quoi il s'agit. La 2e écoute, écouter dès le commencement, noter le vocabulaire spécifique et remarquer les exemples donnés.

(literally: I did not understand a lot, because: I missed the beginning, and also, I did not know what it is about. In the second listen, listen from the very beginning, note specific vocabulary and notice the examples given).

- Typically, in the second listen, the students' pursuit of their goals resulted in a measurable increase in the accuracy and completeness of their comprehension, particularly concerning the exact nature and details of the context, and concerning their perception of numbers, proper names, and lower-frequency words within the texts. During and/or following the second listen, the students often recorded those new and/or differently-perceived elements which had helped them to confirm, or which, conversely, had brought them to revise their earlier interpretation of the text. Typically, they also once again recorded an evaluation of their comprehension, accompanied by a description of any remaining processing problems, or suspected mistakes in processing, as well as the gaps or uncertainties in their comprehension, accompanied in some cases by hypotheses. They then proceeded to again write down precise goals aimed at further confirming and/or supplementing their understanding of the text in the final listen. Typically, these goals pertained, once more, to increasing attention, both *globally* in order to review and confirm their comprehension in all parts of the text, and *selectively* in order to try to understand those elements which remained ambiguous or appeared counter-intuitive. As an example, among Nick's note-book entries following a second listen to a text (in the HP group), one can read:

I understood a lot of the vocabulary, I will use what I already know and what I already understood to understand the rest

each time, it's easier to concentrate

I understood more again this time. I seem to be improving my listening skills. I'm trying not to dwell on one word or sentence I don't understand.

Try to listen harder and to use all I know.

- In the third listen, the students' pursuit of their goals, and – to an extent which clearly appeared important – their discussion of their comprehension with a partner just before this final listen, typically resulted in a further increase in the accuracy and completeness of their comprehension, albeit, in some cases, this increase was not as large as was evident in the second listen. At the end of an exercise in the LP group, Emma, for example, recorded the following entry:

In general, I understood the whole conversation. The dates and numbers were said very quickly, but I understood the subject and the vocabulary. I found this exercise in general very clear but I thought the question was ..., not... (identification of a phonological / segmentation error following a third listen).

- Following the final listen, the factors which students most frequently recorded as having influenced the level of accuracy and completeness which they attained in their comprehension of the listening tasks are: (a) their efforts, in particular, the intensity and uninterruptedness in their attention, (b) their lexical knowledge in French, (c) their general knowledge of the subject matter, (d) their phonological skills in French, (e) their verification of their inferences and elaborations, (f) the speech rate, (g) background noise or technical imperfections in the sound recording, (h) the repetitiveness of listening, (i) the feedback received in the discussions of their comprehension with a partner in the class, and (j) the judicious division of their attention between note-taking and concentration on the listening task.

#### **4.4.2 Summary of findings from the student listening note-book data**

The examination of the types of entries recorded by the students in their listening note-books reveals that the three listens provided to the learners in the context of the listening approach

investigated in this research prompted the students to repeatedly use, in various combinations, all fundamental types of strategies which research has established to be required for effective listening, particularly at lower levels of linguistic proficiency:

- Planning;
- Directed and selective attention;
- Problem identification;
- Monitoring;
- Inferencing and elaboration; and,
- Evaluation.

In sum, in answer to the first research question, the student listening note-book data illustrate that, by guiding the learners through the process of listening comprehension, the three listens regularly provided in accordance with the pedagogical method investigated in this study allowed these students to reflect upon, and to develop, all fundamental aspects of metacognitive awareness, self-regulation, and strategy use which have been argued to be necessary for success in complex cognitive tasks such as L2 listening comprehension (Goh, 1997; Vandergrift et al., 2006; Wenden, 1998, 1999; Zimmerman & Schunk, 2001). These fundamental aspects include:

1. the knowledge of the personal and general factors which affect L2 listening comprehension; and,
2. the executive control (a) in the use of planning skills, (b) in the use of selective attentional skills, (c) in the selection of key information within a message, (d) in the use of all available sources of knowledge, (e) in the use of logical analytical

reasoning, (f) in monitoring skills, (g) in error detection skills, (h) in evaluating, and (i) in problem-solving skills.

Moreover, the students' note-book data suggest that this listening approach allowed the learners to progress according to their individual strengths, weaknesses, and specific corresponding needs. For example: in the LP group, Emma's listening note-book data, when compared with the other students' data, contain a considerably higher number of entries that are related to phonological difficulties, and to this student's attempts to correct her very particular difficulties in this regard, as she similarly described at length in the stimulated recall sessions. In the HP group, Nick's entries reveal a higher number of difficulties and goals related to attention and anxiety control, the more particular problems which Nick reported in the stimulated recall sessions and which he exhibited in the think-aloud sessions. Helen's listening note-book data show a greater focus on caution in reaching interpretations, and clear efforts toward systematicity in comprehension verification and caution in linguistic self-confidence, the particular goals which Helen discussed in the stimulated recall sessions.

In addition to providing detailed complementary answers to the first research question, the findings from the examination of the students' listening note-books provide supportive data also for the linguistic processing described by the learners in their end-of-study summative reports.

## **4.5 Results from the instructor end-of-study summative evaluation data**

### **4.5.0 Introduction**

Further addressing the first research question examined in this study, the instructors in both groups provided evaluations of the self-regulatory approach to L2 listening comprehension development investigated in this research in a 5 item open-ended survey (see Appendix H). It should be noted that the P1 and P2 instructors in the HP group completed joint responses for each question. It should be noted also that the instructors completed the surveys in French. Following are closely literal restatements of their unabridged answers.

#### **4.5.1 Summary of the instructors' evaluations**

The first of the five questions in the instructor open-ended survey sought to discover the extent to which the participating instructors considered that the experimental listening approach had succeeded in developing or strengthening their students' self-regulatory abilities.

In answer to this first survey question, the LP group instructor reported the following:

- The students in his class originally possessed a low level of proficiency (D) and did not really have self-regulatory abilities in L2 listening.
- The experimental method enabled his students to reconsider and revise their original belief that the listening provided within the institutional context would be sufficient for the acquisition of adequate listening skills, and brought them to understand several important points, including the fact that one must invest time outside of the classroom context in order to improve one's comprehension, by listening to the radio or television, communicating with francophones, repeating newly-heard words, doing repeated listens, etc.

- The experimental method enabled his students to become aware of the fact that passive listening is not the best way to improve one's listening skills, and that one must develop appropriate listening strategies such as listening for the context, listening for the key words, listening for the subject(s), etc.
- The experimental method enabled his students, after several listening practices, to become aware of their weaknesses, to become aware of the importance of not translating all words heard, of the importance of establishing the links uniting the thoughts, and it enabled them to become aware of the importance of gaining an overall understanding of aural texts.

The HP group instructors' answers to this first survey question were that:

- Their students already possessed fairly solid listening comprehension skills and self-regulatory abilities, but that nevertheless, the experimental method had enabled them to become aware of their own listening approaches.
- The discussions of their comprehension with a classmate, in particular, had enabled their students to find additional listening strategies, or to modify, or to affirm their strategies such as evaluation of comprehension, or to add other useful elements to their listening approaches.

The second survey question sought to discover the extent to which the participating instructors considered that the experimental listening approach had enabled their students to enrich their knowledge of the factors which influence L2 listening comprehension, including in each of their particular cases.

In answer to this second survey question, the LP group instructor responded that:

- As a result of listening to a variety of texts, his students had become aware of the different accents, that different vocabulary is used in different circumstances, different syntax, etc.
- In addition, the post-listening discussions enabled his students to attend to a variety of the factors which affect listening comprehension such as the speech rate, vocabulary, syntax, pronunciation, accent, tone of voice, choice of words, language register, targeted audience, etc., thus contributing also to the students' enhanced awareness of the factors which affect listening.

The HP group instructors reported that:

- Their students had gained an increased awareness of the possible influences, on listening comprehension, of the following factors: topic, clarity, rhythm, tone of voice, articulation, length, vocabulary complexity, and links in texts.

In the third survey question, the instructors were asked to assess whether the experimental method had contributed to the enhancement of their students' listening abilities.

In response to this third question, the LP group instructor provided the short reply that yes, it had enhanced his students' listening abilities, because they were more sensitive to the factors influencing active listening.

The HP group instructors provided the following response:

- The first listen encouraged students to listen globally; in the second listen, the students were able to devote attention to solving their comprehension difficulties; following the discussion of their comprehension with a classmate, the students paid close attention to the new information contributed by their partner, in order to either complement their understanding, or to further pursue the discussion of their comprehension. This approach proved useful both for the students and for the instructors, from the points of view of motivation, determination, efforts, and confidence in listening potential.

In the fourth survey question, the instructors were asked whether they planned to use the experimental listening method with their next group of students.

The LP group instructor responded:

- Yes, because, based on his observations, the results obtained had demonstrated without a doubt the relevance of this method in students' language learning, particularly in the case of beginner / intermediate learners.

A similar response was expressed by the HP group instructors, who stated:

- It is evident that this method will be very useful to us from the beginning to the end of our students' L2 language learning. As a matter of fact, several instructors have already implemented it in their groups.

In the fifth survey question, the instructors were invited to share any suggestion they may have had concerning the method, or any further observation which they may have deemed relevant to the analyses or interpretation of the results of the data in this study. This final question remained unanswered in both groups.

#### **4.5.2 Summary of findings from the instructor summative evaluation data**

In further answer to the first research question examined in this research, and consistent with the students' summative report data, the instructors' summative evaluation data indicate that:

In the low-proficiency group, the listening development method investigated in this study:

- Fostered the development of the students' (previously poor) self-regulatory abilities in L2 listening comprehension (as evidenced for example in their setting of new goals and increased effort following their reassessment of L2 listening requirements);
- Fostered the development of the students' metacognitive awareness (as evidenced for example in their increased awareness of their individual weaknesses and needs, increased awareness of a wide number of the factors which influence L2 listening, and increased awareness of the appropriate strategic approaches to L2 listening);

- Fostered the development of the students' listening strategy skills (as evidenced for example in their increased use of selective attention, and their increased focus on keyword and context identification); and,
- Enhanced the students' general listening abilities, as a result, in particular, of their increased awareness of the factors which influence L2 listening.

In the high-proficiency group, the instructors reported that, in spite of their students' preexisting high levels of self-regulation, the listening development method investigated in this study:

- Enhanced the students' listening strategy skills (as evidenced for example in their use of a wider number of strategies, and increased use of comprehension evaluation);
- Enhanced the students' metacognitive awareness (as evidenced in their increased awareness of their individual approaches to listening); and,
- Exerted a positive influence of the students' motivation, determination, efforts, and linguistic confidence in L2/L3 listening.

All instructor responses in both groups are consistent with the data from their respective students' end-of-study summative reports and stimulated recalls on the questionnaire.

In sum, in answer to the first research question examined in this study, the instructors' survey data indicate that, in the case of the low-proficiency group, the self-regulatory approach to listening comprehension investigated in this study had positive effects on the students' metacognitive awareness, self-regulatory abilities, strategy use, and on their overall success

in listening comprehension; in the case of the high-proficiency group, the instructors' data indicate that this approach had positive effects on the students' metacognitive awareness and strategy use more particularly. In answer to the third research question, the instructors' survey data also indicate that this approach was well received by both high- and low-proficiency students, and that it exerted a positive influence on their motivation, determination, efforts, and confidence in L2 listening.

#### **4.6 Synthesis of the findings of this study**

##### **4.6.0 Introduction**

The objectives of this study were to investigate the following questions:

- (1) What are the effects of a self-regulatory approach to listening comprehension development on language learners' (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension?
- (2) Are there interrelationships between language learners' metacognitive awareness, self-regulatory abilities, listening comprehension strategy use, and their overall success in listening comprehension? If so, what are these interrelationships?
- (3) What are language learners' perceptions and attitudes towards a self-regulatory approach to listening comprehension development?

In answer to these questions, this chapter has presented the data elicited through six of the instruments which were utilized in this study: the students' questionnaire responses and stimulated recall protocols on the questionnaire, their think-aloud protocols, their end-of-study summative reports on the pedagogical approach investigated in the study, the students' listening note-books, and the instructors' end-of-study summative reports on the pedagogical approach examined in this research.

The first observation stemming from the analyses of these data is that the multi-method schedule of cyclical data collection adopted for this case study – following Davis' (1995) recommendations – made it possible to document, with a relatively high level of detail, the chiefly covert processes of interest in this research. The second important observation is that a high degree of concordance is evident among the data elicited by the diverse methodological procedures.

#### **4.6.1 Synthesis of the findings pertaining to the first research question**

What are the effects of a self-regulatory approach to listening comprehension development on language learners' (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension?

In answer to this first research question, the data concur in indicating that low-proficiency beginner - intermediate level language students and high-proficiency intermediate - advanced level language students alike benefited from the self-regulatory approach to listening comprehension development which was investigated, in particular the low-proficiency students.

A) From the point of view of their metacognitive awareness, the low-proficiency learners in particular – as well as the high-proficiency students, albeit to a lesser extent – reported or demonstrated a clear improvement in:

- awareness of their individual strengths and weaknesses; and,
- awareness of the requirements and particularities of L2/L3 listening comprehension.

B) From the point of view of their self-regulatory abilities, the low-proficiency students in particular reported or demonstrated a clear improvement in:

- setting of higher personal expectations in listening comprehension;
- setting of increasingly challenging listening comprehension goals;
- expending efforts toward listening practice and the development of listening skills, within, as well as independently from, the language learning context; and,
- autonomously tailoring their listening practice to their individual strengths, weaknesses and specific corresponding needs, within as well as independently from the language learning context.

C) From the point of view of listening comprehension strategy use, the low-proficiency students in particular – as well as the high-proficiency students, albeit to a lesser extent – reported or demonstrated an improvement in:

- general efforts, attentional in particular;
- judicious attentional focus while listening (in particular: in their increased focus on the identification of keywords, of the context, and in the filtering out of secondary details);
- efficiency in the consignment of the speech stream to working memory through strategies such as mental visualization;
- judicious use of translation;
- use of inferencing, with increased use of linguistic, contextual and general knowledge, as well as logic;
- use of critical self-questioning following prediction, inference or elaboration;
- systematization and efficiency in the verification of their predictions, inferences and elaborations based on logic and contextual, general, or related linguistic knowledge;
- systematization and efficiency in their retrospective evaluation of their comprehension; and,
- systematization and efficiency in their reflections on the appropriateness of their strategic approaches to listening comprehension.

D) From the point of view of overall success in listening comprehension, the think-aloud – and observation – data reveal a clear improvement, over the course of this study, in the low-proficiency students' level of accuracy and completeness in French listening comprehension.

This improvement appears attributable, in part at least, to their exposure to the self-

regulatory listening approach investigated in this study. In the case of the high-proficiency students, owing most probably to the fact that these more advanced learners already possessed relatively high listening comprehension abilities, no such clear evidence of progress in overall listening ability was documented.

#### **4.6.2 Synthesis of the findings pertaining to the second research question**

Are there interrelationships between language learners' metacognitive awareness, self-regulatory abilities, listening comprehension strategy use, and their overall success in listening comprehension? If so, what are these interrelationships?

In answer to this second research question, the data provide a detailed inventory of the components of metacognitive, self-regulatory and strategic knowledge – as well as of the individual listener characteristics – which can beneficially influence language learners' listening comprehension.

The components of metacognitive knowledge (presuming coexistent, applied strategic knowledge and self-regulation) noted by the researcher to have beneficially influenced the listening comprehension of the language learners in this study are:

- the ability to gauge the relative difficulty posed by a listening task;
- the ability to gauge the approach and strategies most susceptible to lead to success in comprehension; and,
- the ability to assess the degree of completeness / precision which one can reasonably set as a comprehension objective, based, in particular, on one's awareness of one's L2 listening proficiency level, one's general knowledge of the subject of the message, and the relative difficulty correspondingly presented by the comprehension of the aural message.

The components of self-regulation (presuming coexistent, applied metacognitive knowledge and strategic knowledge) noted by the researcher to have beneficially influenced the students' listening comprehension are:

- determination and perseverance;
- awareness and control of one's nervousness or anxiety;
- awareness and control of one's attention, in particular: the ability to resist focusing excessively on ambiguous segments while the aural message unfolds, to remain focused even if the comprehension of the aural message presents a high level of difficulty, and to sustain concentration from the very beginning to the very end of the message;
- awareness and control of one's individual characteristics which could negatively influence listening comprehension (such as pronounced perceptual difficulties, or a tendency to impulsivity in judgments and interpretations) through the use of compensatory strategies such as increased monitoring, critical self-questioning and evaluation;
- awareness of one's working memory limitations, and use of compensatory strategies such as organized note-taking or increased visualization as warranted; and,
- the ability to follow the comprehension objectives set.

The components of strategic knowledge (presuming coexistent, applied metacognitive knowledge and self-regulation) noted by the researcher to have beneficially influenced the listening comprehension of the language learners in this study are:

- the ability to accurately identify the key words / topic / context;
- the ability to ignore secondary details when warranted by one's L2 listening proficiency level, and/or general knowledge, and/or the relative difficulty presented by the comprehension of the aural message;
- the ability to retain the speech stream in working memory;
- the ability to retain prior as well as on-going reasoning and interpretations in working memory;
- the systematic manipulation of indistinct or counter-intuitive L2 sounds or words;
- the recollection of prior listening experiences in aid to comprehension;
- the use (with appropriate caution) of inferencing and/or elaboration based on linguistic and/or contextual clues, and/or general knowledge, and/or logical analytical reasoning;
- the systematic verification of inferences and/or elaborations based on additional linguistic and/or contextual clues, and/or general knowledge, and/or logical analytical reasoning;

- the systematic monitoring, self-questioning, and evaluation of comprehension based on all pertinent linguistic and other sources of knowledge available, and based on logical analytical reasoning;
- the systematic evaluation of on-going interpretations and hypotheses based on prior interpretations and hypotheses, and on prior parts of the speech stream retained in working memory;
- the flexibility to consider interpretations which may appear counter-intuitive if a counter-intuitive meaning has been appropriately confirmed by adequate L2 lexical knowledge; and,
- the retrospective evaluations of the levels of comprehension attained in L2 listening, for the remedial purpose of identifying the principal factors influencing one's achievement in L2 listening comprehension.

In addition, the following individual listener characteristics were noted by the researcher to have beneficially influenced the listening comprehension of the language learners in this study:

- the accuracy and automatization in L2 phonological skills;
- L2 lexical knowledge;
- L1 lexical knowledge;
- general knowledge;
- logical analytical reasoning skills; and,
- prior L2 learning and listening exposure.

The data in this study suggest that weaknesses in the major components of metacognitive knowledge, self-regulation, strategy knowledge, or in the individual characteristics listed above can have negative effects on the other components or characteristics and, in a chain of interrelated consequences, on the level of comprehension attained in L2 listening.

The various sources of data in this study suggest that, in the complex multi-processing entailed in L2 listening comprehension, highly intricate interrelationships continuously occur among listeners' (1) L2 lexical knowledge, (2) phonological skills, (3) metacognitive awareness, (4) self-regulatory abilities, and (5) strategy knowledge and use, which can have

fundamental effects on the level of accuracy and completeness which they attain in L2 listening comprehension. These data further suggest that adequate strength in each of these five domains is necessary for listeners to reach high levels of accuracy and completeness in their understanding of L2 texts at a level of difficulty equivalent or slightly superior to their general L2 proficiency level.

In particular, the think-aloud data in this study clearly illustrate that, among those individual characteristics listed previously (which, strictly speaking, are unrelated to metacognitive, self-regulatory, or strategic knowledge), two factors in particular can be the cause of serious difficulties and break-downs in listening comprehension in the case of high- and low-proficiency students alike: (1) weaknesses in L2 phonological skills, and (2) weaknesses in L2 lexical knowledge. In this study, these two factors were the ones observed to most frequently and most fundamentally hinder – in a chain of interrelated consequences – students' attentional capabilities, memory capabilities, their capability to deploy their metacognitive knowledge, their capability to apply their self-regulatory skills, their capability to apply strategies judiciously and, ultimately, their comprehension of the aural texts.

#### **4.6.3 Synthesis of the findings pertaining to the third research question**

What are language learners' perceptions and attitudes towards a self-regulatory approach to listening comprehension development?

In answer to the third research question investigated in this study, the data collected concur in indicating that, overall, the students' attitudes toward the self-regulatory approach to listening examined in this study were positive.

All students provided particularly positive feedback concerning:

- the opportunity to listen to aural texts three times consecutively;
- the opportunity to discuss their comprehension with a classmate following the second of the three listens;
- the opportunity for verification and the reinforcement / reinvestment activities following the listening (in particular, the opportunity to verify their listening comprehension based on the transcription of the aural excerpt, and the instructor-directed analysis of the written and aural forms of the texts from the points of view of pronunciation, vocabulary, grammar, etc); and,
- the absence of formal academic evaluation in the context of this listening practice, which the students reported had enabled them to feel less anxious and to derive a greater enjoyment from the listening development activities.

In addition, the various sources of data in this study concur to indicate that overall, as a result of their exposure to the self-regulatory listening approach investigated in this study, low- and high-proficiency L2 and L3 students alike experienced:

- increased linguistic self-confidence;
- increased general interest in L2/L3 listening, within, as well as outside of, the language learning context;
- increased enjoyment in L2/L3 listening, within, as well as outside of, the language learning context; and,
- increased skill in L2/L3 listening comprehension.

In the next chapter, the main results pertaining to each research question are individually discussed in the light of previous empirical evidence in the field of L2 listening and related research fields.

## Chapter V

### Discussion

#### 5.0 Overview

This study has examined the following research questions:

- (1) What are the effects of a self-regulatory approach to listening comprehension development on language learners' (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension?
- (2) Are there interrelationships between language learners' metacognitive awareness, self-regulatory abilities, listening comprehension strategy use, and their overall success in listening comprehension? If so, what are these interrelationships?
- (3) What are language learners' perceptions and attitudes towards a self-regulatory approach to listening comprehension development?

In answer to these questions, Chapter IV has presented the findings from the data elicited by the students' questionnaire responses and stimulated recall protocols on the questionnaire, their think-aloud protocols, their end-of-study summative reports on the self-regulatory listening development method investigated in this study, as well as their listening notebooks, and the instructors' end-of-study summative reports on the listening development method examined in this research.

The language learning context selected for this study presented a challenging environment in which to examine the instructional approach of interest in this research. Indeed, all students were mature adult L2 learners (median age 40) in a compulsory language learning situation. Furthermore, one group of learners (beginner - intermediate level students) had been assessed by the learning institution as slow progressing, and possessing low linguistic

abilities and poor self-regulation, while the other group of participants (intermediate - advanced level students in a fast-track learning group) had been assessed by the institution as possessing high language learning abilities and high self-regulatory abilities; the latter students had already reached a relatively advanced level of L2 proficiency. Under these experimental circumstances, it was reasonable to expect that the higher proficiency group might have drawn or perceived little benefit from the listening training, and that they consequently might have adopted a negative attitude toward the pedagogical intervention. It was equally reasonable to expect that the poorly self-regulated, low-proficiency, mature adult learners in the beginner - intermediate group might have shown resistance toward an autonomy-fostering pedagogical approach which involves uninhibitedly discussing one's comprehension difficulties.

In spite of the challenges presented by the language learning context, all sources of data concur to indicate that both the high- (HP) and low-proficiency (LP) participants responded positively to the self-regulatory listening development method experimented, and that both HP and LP students drew benefits from this pedagogical intervention.

Both HP and LP students in this study reported that the self-regulatory approach to listening development had enabled them to refine their listening skills, and to experience increased confidence in their listening abilities, increased general interest in listening – within as well as beyond the classroom context – and increased enjoyment from L2 listening.

In the case of both groups of participants, the results suggest that this method had positive effects on all aspects of metacognitive awareness, self-regulatory abilities and listening

strategy use which are thought to be essential to listening comprehension success. Furthermore, toward the end of the study, a clear improvement in overall listening comprehension success was documented in the low-proficiency beginner - intermediate group. No such clear improvement in overall listening comprehension success was documented in the higher proficiency group over the course of the nine weeks of listening training, owing most probably to the fact that the intermediate - advanced learners already possessed a relatively high level of L2 proficiency and listening ability.

The data in this study provide a detailed inventory of the components of metacognitive, self-regulatory, and strategic knowledge – and of individual listener characteristics – which can influence learners' success in L2 listening comprehension. The think-aloud data in particular suggest that weaknesses in major components of metacognitive knowledge, self-regulation, strategy knowledge, or in individual characteristics such as L2 lexical knowledge or phonological skills, can have negative effects on the other components or characteristics and, in a chain of interrelated consequences, on the level of comprehension attained in L2 listening.

The various sources of data in this study suggest that, in the complex multi-processing entailed in L2 listening comprehension, highly intricate interrelationships continuously occur among five factors – language learners' (1) L2 lexical knowledge, (2) phonological skills, (3) metacognitive awareness, (4) self-regulatory abilities, and (5) strategy knowledge and use – which can have fundamental effects on the level of accuracy and completeness which the learners attain in L2 listening comprehension. The data further suggest that adequate strength in each of these five domains is necessary for listeners to reach high levels of accuracy and

completeness in their understanding of L2 texts at a level of difficulty equivalent or slightly superior to their general L2 proficiency level.

Finally, instructors and students alike provided positive feedback concerning the design of the self-regulatory listening development tasks adopted for this study. Instructors and students stressed the value of conducting several consecutive listens of a text, the value of the reflection and note-taking time which was an integral part of the listening activities, the value of discussing individual listening comprehension difficulties in collaboration, and they stressed the value of instructor-directed, explanatory, reinforcement and reinvestment activities (in particular, the value of the comparative analysis of the aural text and its transcription) immediately following the listening. The students also reported that the absence of formal academic evaluation, in the context of this listening practice, had enabled them to feel less inhibited or anxious, more focused, and to derive greater enjoyment from the listening activities.

In the following sections, the results pertaining to each of the three research questions are discussed in the light of previous research findings.

## **5.1 Discussion**

### **5.1.1 Observed effects of the self-regulatory approach to listening comprehension development examined in this study on language learners' (a) metacognitive awareness, (b) self-regulatory abilities, (c) listening comprehension strategy use, and (d) overall success in listening comprehension**

The first research question investigated in this study focused on the effects of a self-regulatory approach to listening comprehension development on four dimensions of L2 listening comprehension, namely: metacognitive awareness, self-regulatory abilities, strategy use, and overall comprehension. The next four sections discuss the individual results pertaining to each of these dimensions.

#### **5.1.1.1 Observed effects on language learners' metacognitive awareness**

As was outlined in Chapter II, Chamot et al. (1999) argued that:

“When listeners know how to (a) analyze the requirements of a listening task; (b) activate the appropriate listening processes required; (c) make appropriate predictions; (d) monitor their comprehension; (e) problem-solve to guess the meaning of what they do not understand; and (f) evaluate the success of their approach, they are using metacognitive knowledge for successful listening comprehension.”

The data in this study suggest that the self-regulatory listening method examined exerted beneficial effects on low- as well as on high-proficiency learners' metacognitive awareness. In the case of the LP group, this method considerably assisted the learners in developing and applying the metacognitive knowledge and skills necessary for successful comprehension as described by Chamot; and in the HP group, this method assisted the learners in enriching and refining their pre-existent metacognitive knowledge and skills.

An interesting question is: *How* might this improvement process in the learners' metacognitive awareness have unfolded?

Victori and Lockhart (1995) provide a very plausible answer to this question. Based on their own findings, these researchers contended that:

“... students develop accurate or inaccurate beliefs about how cognitive factors such as intelligence, attitude, age and motivation influence language learning, as well as beliefs about their weaknesses and strengths and their self-concept as learners (person knowledge). They also have some knowledge about the task of language learning, its difficulty, and their role in the whole endeavour (task knowledge). Finally, learners develop ideas about using certain strategies and about their potential effectiveness (strategic knowledge). Learner training should start by considering this knowledge which students themselves bring to the task of language learning, and help learners modify it if it (their metacognitive knowledge) is potentially impeding their learning and their potential for autonomy.” (Victori & Lockhart, 1995, p. 225).

The data in this study suggest that, consistent with Victori and Lockhart’s findings and recommendations, the listening training approach examined in the present study provided the learners with the opportunity to consider the metacognitive knowledge which they brought to the L2 listening tasks, and to modify this knowledge based on their assessments of the extent and manner in which it was impeding their listening ability and their potential to be self-regulated listeners.

The learners’ stimulated recalls on the questionnaire and their summative report data, in particular, contain numerous examples of all three types of metacognitive knowledge described by Victori & Lockhart following Flavell’s (1979) classification scheme (even though, as Flavell pointed out could be the case, the person / task / strategic types of metacognitive knowledge frequently overlap in the learners’ descriptions).

All students provided examples of the manner in which the instructional approach investigated in this study had enabled them to gain a greater awareness of their individual strengths and weaknesses in L2 listening (person knowledge). These examples of increased *person* knowledge include the learners’ reports of greater awareness of the weaknesses in their L2 lexical knowledge and phonological skills, of the faults in their individual

approaches to listening, and greater resulting awareness and understanding of the reassessments warranted by their individual strengths, weaknesses and approaches in listening (see, for example, the students' answers to the summative report question No 6, in section 4.3.1).

Examples of increased *strategic* knowledge (presuming also, it is reasonable to argue, person and task knowledge) include the learners' reports of increased attention, increased monitoring, and increased critical self-questioning and evaluation during and immediately following listening.

Examples of increased *task* knowledge (presuming, it is reasonable to argue, person and strategic knowledge also) include the learners' reports of increased awareness of the fact that the opening lines were the location in L2 aural texts where they tended to experience the greatest difficulty understanding and keeping up with the speech stream, and that adequate comprehension of opening lines thus required increased directed and selective attention on their part. Other examples of increased task knowledge include the learners' descriptions of their attempts to compensate for their working memory limitations by experimenting with more effective visualization and note-taking techniques, and their attempts to compensate for the weaknesses they had identified in their phonological skills by means of out-of-class listening practice exercises.

It is interesting to note that, in most current conceptualizations of metacognitive knowledge (such as Victori and Lockhart's), Flavell's (1979) original tripartite classification scheme has been retained, unchallenged. It appears reasonable however to argue that, in the case of L2

listening comprehension, the existence of boundaries between strategic and task knowledge are not at all clear. Rather than appearing separate or distinct, strategic and task knowledge appear to be reciprocally conditional, and thus fundamentally interdependent. Indeed, for example: It is legitimate to argue that, without knowledge of the requirements of L2 listening (task knowledge), learners cannot be expected to apply the appropriate strategies to listening tasks (strategic knowledge). Moreover, it appears reasonable to argue that both strategic and task knowledge are conditional upon, and dependent from, person knowledge: Without knowledge of their individual strengths, weaknesses, and potential (person knowledge), listeners cannot be expected to effectively capitalize on their strengths or to effectively compensate for lacunae in their approaches to L2 listening tasks (task / strategic knowledge).

The value of - even critically - discussing the results of this study within Flavell's tripartite classification scheme into person, strategic and task knowledge is that this classification scheme highlights the importance of *all three types* of metacognitive knowledge for successful L2 listening comprehension, and it suggests that, in L2 listening training, the development of person knowledge may be a prerequisite to the development of strategic and task knowledge. This finding is consistent with Wenden's (1998) argument that "person knowledge can affect learners' choices related to learning objectives and how they evaluate their learning outcomes" (cited in Liu & Goh, 2006, p. 93). The importance of person knowledge in L2 listening comprehension may in fact be such that it could partly explain the success of the instructional approach investigated in this study. Indeed, this particular approach provided the learners in this study with repeated opportunities and adequate time to gain a deeper knowledge of their individual strengths, weaknesses, and of their corresponding capabilities and needs in the course of their exposure to the listening tasks; in

other words: it provided them with the opportunity and time to diagnose with precision the problems and challenges which they needed to address in order to improve their listening abilities. These regular opportunities and adequate time for listening also enabled the learners to concurrently develop or refine their knowledge of the requirements of L2 listening (task knowledge), and to thus gradually fine-tune their strategic approach in listening tasks (strategic knowledge). One can even venture to speculate that the disappointing results obtained in many previous listening development attempts through strategy training alone may be explainable in part by the fact that inadequate time and opportunities may have been accorded to the development – first – of the L2 listeners' person knowledge.

The findings of this study lend strong support to Goh's (1997) claims that process-based reflections on their listening comprehension encourage language learners to consider what leads to their success and failure in listening, to anticipate the problems they might face, to consider ways of minimizing the effects of these problems, and to make decisions about how to improve their listening comprehension (Goh, 1997, p. 368).

The findings of the present study are also consistent with Goh & Taib's (2006) empirical findings to that effect in an English language learning context in Singapore. In the latter study, elementary school learners exposed to a metacognitive awareness-raising / self-regulatory approach to listening comprehension development reported a greater awareness of their thinking processes when listening, and that they attempted to find ways to understand the listening texts better. Goh & Taib noted a greater degree of self-appraisal and self-management of listening on these young learners' part, who learned to attend to their mental processes during and after listening, rather than merely focusing on the comprehension

questions and answer options (Goh & Taib, 2006, p. 228), findings which are themselves very similar to those made by Vandergrift (2002) in a French language learning elementary school context in Canada.

Turning now to methodological considerations, one inconsistency was noted in the students' reports, in the present study: At the very beginning of the research, the metacognitive awareness, self-regulatory behaviour and strategy use reported in the questionnaire by the LP students did not always align with the metacognitive awareness, self-regulatory behaviour and strategy use which were documented among those students in actual listening performance through the think-aloud procedure. In contrast, the metacognitive awareness, self-regulatory behaviour and strategy use reported by the HP students aligned relatively closely with their practice in actual listening performance.

Victori made similar observations. In her 1999 study, she found that the poorer language learners' reported strategy knowledge (in writing, in this case) did not always coincide with what they actually did, while the reported behaviour of the skilled writers aligned more with their practice (Victori, 1999, cited in Zhang & Goh, 2006, p. 202).

Zhang & Goh (2006), who investigated Singapore secondary school students' metacognitive knowledge about strategies for learning to listen to (and speak) standard English, their perceived use of the strategies, and the relationship between such knowledge and perceived strategy use, came to similar observations:

“... almost all the strategies for comprehension were perceived by more than 50% of the students as useful for assisting comprehension in transactional one-way listening situations. These included such cognitive and metacognitive strategies as prediction,

visualization, inferencing, contextualization, selective attention and directed attention... However, although such perceptions reflected the students' awareness of the usefulness of different kinds of comprehension strategies, they tended to under-use such strategies and only three were reported used often." (Zhang & Goh, 2006, p. 212).

These discrepancies which were noted, in Zhang & Goh's, Victori's, and the present study, between the metacognitive, self-regulatory, and strategic behaviours reported in questionnaires and those documented in actual listening performance deserve mention, because they underscore the need for rigorous triangulation in the investigation of the invisible processes underlying listening comprehension.

In the present study, the use of the stimulated recall methodology immediately following each questionnaire administration yielded a wealth of data to verify and explain the students' numerical questionnaire responses (see, for example, the students' explanations of their use of translation, in section 4.1.2). This is consistent with the view shared by an increasing number of L2 researchers and methodologists that questionnaires lend themselves well to follow-up retrospective research, and that such a two-phase quantitative-qualitative design brings out the best of both approaches while mitigating the shortcomings and biases inherent in each paradigm, and that it can ensure systematicity and comprehensiveness in data collection (Alderson, 1992; Brown, 2001; Dörnyei, 2003; Gass & Mackey, 2000; Gillham, 2000; Lazaraton, 2000; Perry, 2002).

Returning, now, to the discussion of the main findings of this study: The improvements documented in the learners' metacognitive awareness were in turn found to have exerted beneficial effects on the students' self-regulatory abilities, as is discussed in the next section.

### 5.1.1.2 Observed effects on language learners' self-regulatory abilities

The beneficial effects, on the learners' self-regulatory abilities, of the listening method investigated in this study were most clearly evident in the low-proficiency group.

As was outlined in Chapter II, in most conceptualizations of self-regulated learning (e.g. Eilam & Aharon, 2003, or Winne, 1995, 1996, 2001):

“Self-regulated learners are aware of what they know, what they believe, and what the differences between these kinds of information imply for approaching tasks. They draw on their knowledge and beliefs to construct an interpretation of the task at hand, and they set goals for extending knowledge and sustaining motivation. They have a grasp of their motivation, are aware of their affect, and plan how to manage the interplay between these factors in their approach to the task. Such learners deliberate about the skills and strategic processes which might be best suited for attaining their goals, and judge performance success in comparison with those goals. They perceive cues accurately, examine the strategies they have selected in light of their achievements, and adjust their activities accordingly. At the same time, these learners manage the interplay between the cognitive and affective aspects of their behaviour during engagement with the task, sustaining motivation when encountering obstacles.”

The various sources of data in this study all concur to indicate that the self-regulatory listening approach investigated fostered the development of the low-proficiency students' self-regulatory abilities in L2 listening. Indeed, these LP students' testimonies are consistent with Winne's (1995, 1996, 2001) or Eilam & Aharon's (2003) conceptions of self-regulated learners.

In their mid-study and end-of-study stimulated recalls on the questionnaire in particular, the LP students consistently reported that, as a result of the listening practice and of their greater

awareness of their individual strengths and weaknesses and greater awareness of the requirements of L2 listening comprehension, they had come to modify many aspects of their approaches to listening comprehension, to set higher personal expectations, higher achievement goals, and had come to expend greater time and effort toward the acquisition of fluent listening skills than previously. These students provided numerous examples of out-of-class listening practice activities which they had undertaken at their own initiative, in reaction and response to the needs and weaknesses which they had identified in their listening skills during the class listening exercises (see, for example, Emma's stimulated recall protocols on questionnaire item 24, in section 4.1.2). These students also repeatedly explained that they had tailored their personal out-of-class listening activities to "be fun", in the words of one student, because they had enjoyed the class activities and wished that their out-of-class listening practice also be enjoyable. This illustrates that the students were also cautious to manage the interplay between the cognitive and affective aspects of their self-initiated listening skills development (see, for example, John's stimulated recall protocols on questionnaire item 43, section 4.1.4). The students further explained that, while listening out-of-class, they deliberately employed strategic approaches and evaluation techniques which they had discovered to be effective in the class listening exercises. Furthermore, the LP students explained in great detail the many modifications which they had effected in their strategic approaches to listening comprehension in the context of the class listening exercises, as is discussed in detail in the following section.

The increased self-regulatory abilities documented among the low-proficiency students in the present study are consistent with Vandergrift's (2003b, p. 435) findings that

“consciousness-raising [tasks] can encourage students to take on the responsibility for planning, monitoring, and evaluating their own learning”.

These results also support Wenden’s (1998) claim that: “In learning transfer, metacognitive knowledge facilitates the appropriate choice of previously learned strategies to achieve learning goals and/or to deal with problems encountered during the learning.” (Wenden, 1998, p. 526).

Similarly to the manner in which the beneficial effects exerted by the listening method on the learners’ metacognitive awareness were found to have resulted in improvements in the learners’ self-regulatory abilities, the learners’ increased self-regulatory abilities were, in turn, found to have exerted beneficial effects on the students’ listening comprehension strategy use. These findings, which further support Wenden’s (1999) claims, are discussed in the following section.

#### **5.1.1.3 Observed effects on language learners’ listening comprehension strategy use**

The beneficial effects of the listening method investigated in this study on the learners’ listening comprehension strategy use were – once again – most clearly evident in the low-proficiency group. In the case of these learners, the beneficial effects of the method on the students’ strategy use were considerable. Indeed, the various sources of data utilized in this research all concur to indicate that, over the course of the nine week listening training, the

LP students demonstrated an improvement in all aspects of strategy use established by research as most influential in the level of comprehension attained in L2 listening.

As was outlined in Chapter II, a key factor in successful listening is the ability to efficiently integrate information gathered through both bottom-up and top-down processing (Field, 2004; Lynch & Mendelsohn, 2002; McLaughlin et al., 1983; Tsui & Fullilove, 1998). Research has established that less skilled L2 listeners frequently focus excessively on individual segments, and that this excessive bottom-up processing can have highly detrimental effects on their overall listening comprehension, as (a) it influences their ability to redirect their attention, to keep up with the speech stream and perceive all segments, and to retain in memory even those segments that may have been accurately perceived and understood, and (b) it frequently leads to errors in transfers and translations (Bacon, 1992a,b; Eastman, 1991; Goh, 2000; Vandergrift, 2003a,b).

At the beginning of the study, this excessive bottom-up processing approach was pervasive in the LP group (whose L2 phonological and lexical recognition skills were weak), and in most cases, it was highly detrimental to these students' overall comprehension (as was similarly documented by Field (2003), Vandergrift (1997), or Wilson (2003), for example). Moreover, in their bottom-up processing, the LP students in this study showed pronounced weaknesses in their ability to suppress irrelevant information (a strategy whose importance was underlined by Kintsch, 1998, for example), and this weakness also frequently had serious negative effects on the students' comprehension (in particular, once again, on their attentional capabilities, on their ability to keep up with the speech stream, and on their memory capabilities).

At the beginning of this study, the LP students' excessive use of bottom-up processing did not preclude their also frequently making excessive use of top-down processing, compensatorily (for the same reason for which they made excessive use of bottom-up processing, i.e. to compensate for the weaknesses in their L2 phonological and lexical recognition skills), precisely as was documented by Field (1998, 2004). As was documented also by Field – and Wu (1998), for example – the LP learners in this study “frequently made a rough attempt at one-to-one match with a known item which potentially overruled contextual information and modified perceptual” (Field, 2004). As further argued by Field – as well as by Wu, and by Wilson, for example – this processing approach which, strictly speaking, qualifies as ‘top-down’ processing, highlights the fact that ‘higher-level processing’ does not necessarily lead to successful L2 listening comprehension, but that rather, it can seriously mislead listeners. Indeed, at the beginning of the present study, the LP students' excessive use of top-down processing frequently led to errors in their interpretations, in particular because these learners failed to monitor their comprehension with consistency and to systematically evaluate their inferences and elaborations based on logical-analytical reasoning or on a variety of knowledge sources.

The excessive uses of either bottom-up or top-down processing, and the other processing problems documented in the present study, are consistent with the types and causes of difficulties identified by Goh (2000) in her analysis of the real-time listening problems of Chinese ESL learners. In the latter study as in the present study, the L2 learners' listening problems were principally the result of:

“... sound-script and word-referent processes [which] were not yet automatized, poor sound representations of familiar words, failure to use appropriate comprehension tactics, a lack of appropriate schematic knowledge, insufficient prior knowledge, preoccupation with knowing the meaning of certain content words, limited processing capacity in short-term memory and shallow processing.” (Goh, 2000, p. 69).

Yet in spite of these serious handicaps, all data in this study concur to indicate that, over the course of the nine week listening training, the LP students demonstrated a considerable improvement in all of the previously-mentioned areas where serious weaknesses were documented at the beginning of the study, including: in attentional and memory capabilities, in the judiciousness in translation, inferencing, elaboration, monitoring, and evaluation, and in the general resourcefulness in compensating for individual weaknesses in phonological or lexical recognition skills.

The findings of this study suggest that the LP learners' improved self-regulatory abilities enabled them to adopt a considerably more efficient strategic approach to L2 listening tasks. These results are consistent with those of numerous studies in a variety of other fields of research which have established, as outlined in Chapter II, that self-regulatory abilities enable learners to act more effectively when encountering academic tasks (Boekaerts, Pintrich & Zeidner, 2000; Tseng, Dörnyei & Schmitt, 2006; Wenden, 1999; Zimmerman & Schunk, 2001).

These results are also consistent with Goh & Taib's (2006) findings. The increase in metacognitive knowledge reported by the young learners in the latter study likewise was most evident in their strategy use. A comparison of the pupils' final reflections with their earlier verbal reports showed that they had acquired a wider range of strategies for

facilitating listening over the course of that study. Strategies reported by a minority during the eight listening development lessons were reported by most of the pupils in the group by the end of the training. These strategies included increased directed attention, increased visualization, increased inferencing, and increased efforts to maintain interest (Goh & Taib, 2006, pp. 228-229), some of the very strategies of whose importance and appropriate use the adult learners in the present study gained an increased awareness. These results are also consistent with Liu and Goh's (2006) empirical findings.

In the case, once again, of the low-proficiency students in this study, the beneficial effects exerted by the listening training on these learners' metacognitive awareness, self-regulatory abilities, and strategy use in turn resulted in a clear improvement in their overall listening comprehension skills, as is discussed in the next section.

#### **5.1.1.4 Observed effects on language learners' overall success in listening comprehension**

The comparative analyses of the low-proficiency students' reports of comprehension in the beginning- and end-of-study think-alouds revealed a considerable improvement in the level of accuracy and completeness which these students were able to attain. This improvement in their overall comprehension appeared to result in large part from considerably more appropriate strategy use and from enhanced word recognition skills.

The young learners in Goh & Taib's study likewise reported that they had perceived an improvement in their listening ability after similar self-regulatory listening training sessions, and their pre- and post-training listening test scores appeared to confirm this improvement.

As in the case of the mature adult students in the present study, these young learners attributed this improvement to their growing ability to manage the listening process. Furthermore, as in the present study, Goh & Taib found that the weaker students appeared to benefit the most from the self-regulatory / metacognitive awareness-raising listening training (Goh & Taib, 2006, pp. 228-229).

Investigating the effects of (electronically reproduced) listening task repetition similar to that examined in the present study, Jensen & Vinther (2003) also documented positive effects of that approach on students' comprehension. In the latter study, upper-intermediate level Danish university students learning Spanish demonstrated "a statistically significant improvement in global comprehension and in phonological decoding skills, as well as in grammatical accuracy". Jensen and Vinther concluded that "thus, listening to the material ... [repeatedly] with the opportunity to focus on the form of each fragment after the first effort of extracting the meaning proved a fruitful teaching device... [and] that training in detailed decoding helps learners improve their skill in handling high-speed input, for immediate comprehension, for acquisition of phonological decoding strategies, and for acquisition of language form." (Jensen & Vinther, 2003, pp. 403 & 405). These researchers further explained that they viewed the students' significant increase in comprehension proficiency as "a result of the interaction between the learners' inferencing work at the first hearing and the continuous and automatic feedback to their hypotheses about language form and meaning given in the subsequent repetitions." (Jensen & Vinther, 2003, p. 406).

Victori and Lockhart (1995) also reported positive results in their investigation of a self-regulatory approach to hispanophone ESL learners' metacognitive development. In 40 out of

the 41 cases included in their study, this approach succeeded in enhancing the language learners' metacognition, and in their perceiving an increased rate of progress in their learning. These researchers posited that:

“Enhanced metacognition presumably leads to more autonomy through improved self-knowledge, use of more efficient strategies, and a wider variety of resources and increased contact with the language. A more autonomous approach, in turn, appears to accelerate the rate of progress. This process seems to interact with the learner's feelings (less anxiety, more motivation, improved self-esteem), further accelerating the whole process.” (Victori & Lockhart, 1995, p. 232).

Victori and Lockhart added that they had perceived that:

“... metacognition, autonomy and learning interact with each other, and that the dynamism of this interaction can be seriously impaired if metacognition is not enhanced.” (Victori & Lockhart, 1995, p. 232).

Victori and Lockhart's observation is supported by the data gathered in the present study in answer to the second question investigated. The following section now discusses the results pertaining to this second research question.

#### **5.1.2 Observed interrelationships between language learners' metacognitive awareness, self-regulatory abilities, listening comprehension strategy use, and their overall success in listening comprehension**

The data in this study suggest that highly intricate interrelationships continuously occur among language learners' (1) L2 lexical knowledge, (2) phonological skills, (3) metacognitive awareness, (4) self-regulatory abilities, and (5) strategy knowledge and use, which can have fundamental effects on the level of accuracy and completeness which they attain in L2 listening comprehension.

These findings depart to some extent from the findings of previous L2 listening studies, which have tended to assign a primordial influence, in L2 listening comprehension, to effective *strategy use* and effective *top-down processing* (e.g. O'Malley & Chamot, 1990).

The results of this study suggest that strategy use is only *one* of the fundamental influences which determine overall comprehension. In particular, this study underscores fundamental influences of L2 lexical knowledge and of phonological recognition skills over the deployment of metacognitive knowledge, self-regulation and strategies, and consequently, over the overall efficiency of processing and the overall comprehension outcomes in L2 listening.

Since the second research question which was examined in this study had not previously been the focus of investigation in L2 listening research, one must turn to the findings in other fields of L2 research, in order to shed light on the plausibility of these findings.

In the field of L2 reading research, for example, Nassaji (2004) investigated the relationship between ESL learners' depth of vocabulary knowledge (understood as the quality of lexical knowledge, or how well a learner knows a word, in contrast to the breadth of vocabulary, which refers to the number of words known), their lexical inferencing strategy use, and their success in deriving word meaning from context. Nassaji's results revealed:

“a significant relationship between depth of vocabulary knowledge and the degree and type of strategy use and success. They revealed that (a) those who had stronger depth of vocabulary used certain strategies more frequently than those who had weaker depth of vocabulary knowledge, (b) the stronger students made more effective use of certain types of lexical inferencing strategies than their weaker counterparts, and (c) depth of vocabulary knowledge made a significant contribution

to inferential success, over and above the contribution made by the learners' degree of strategy use."

In his discussion of those results, Nassaji (2004) argued that:

"[His] results, [which] indicate a significant link between depth of vocabulary knowledge and the type and degree of lexical inferencing strategy use... add to and confirm the literature in both L1 and L2 learning concerning the central role of vocabulary knowledge in lexical inferencing, and support the hypothesis that lexical inferencing is a meaning construction process that depends heavily on the richness of the learner's semantic and conceptual system... They are also consistent with the theoretical view that the ability to make use of contextual clues in inferencing depends, to a large extent, on having an adequate knowledge base in place, in this case, a threshold of vocabulary knowledge..."

In spite of the fact that a number of crucial differences exist between *listening* and *reading* skills, it appears reasonable to contend that Nassaji's findings lend support to the findings of the present study in the investigation of the second research question.

The interrelationships documented, in the present study, between metacognitive awareness, self-regulation, strategy use, and L2 phonological skills and lexical knowledge are also supported by the findings from Wenden's (1998) extensive review of theoretical writings and research reports which aimed to determine the function of metacognitive knowledge in learning. Based on her review, Wenden argued that:

"metacognitive knowledge is a prerequisite for the self-regulation of learning: it informs planning decisions taken at the outset of learning and the monitoring processes that regulate the completion of a learning task, i.e. self-observation, assessment of problems and progress, and decisions to remediate; it also provides the criteria for the evaluation made once a learning task is completed ... [However,] ... metacognitive knowledge is insufficient. Domain knowledge plays an essential and complementary role." (Wenden, 1998, p. 528).

The findings of this study in answer to the second research question investigated also lend strong support to Goh's argument that:

“Although the value of listening training is inconclusive, research findings could still be used to improve learner listening indirectly through awareness-raising tasks. ... [because there] appears to be a strong relationship between learners’ metacognitive knowledge and strategy use, as research in both education and ESL/EFL has shown (Paris & Winograd, 1990; Gagné et al., 1993; Mantle-Bromley, 1995; Yang, 1999; Cotterall, 1999).” (Goh, 2002, p. 203).

The interrelationships documented in the present research also find support in Wu’s (1998) retrospection study of the sources of Chinese EFL test-takers’ comprehension successes and failures. Wu’s findings were that:

“For EFL listeners, ... linguistic processing is basic in the sense that failure or partial success in it may result in their allowing the activated non-linguistic knowledge to improperly dominate their decision-making. Further, it may induce groundless guessing... Linguistic processing is basic also in the sense that competence in it constrains but does not preclude non-linguistic knowledge activation... A distinction can in fact be made between the compensatory and facilitating functions of non-linguistic processing. The present study shows that the former function is more associated with less successful linguistic processing and/or less able listeners, whereas the latter goes with more advanced listeners and/or more competent linguistic processing.” (Wu, 1998, p. 37).

The sources of the listening comprehension successes and failures documented in the present study among HP and LP students at the beginning of the research included those very same sources as were documented by Wu in his study.

Segalowitz & Segalowitz (1993), for example, are among a number of researchers who came to the same conclusions as were reached in Wu’s, or in the present study, that automatization of word recognition skills plays a crucial role in successful listening comprehension.

Segalowitz (1997, p. 103) has argued that the automatization of components such as phonological recognition skills reduces the burden on short-term memory, and facilitates the chunking of information into higher-level units (Hulstijn, 2001, p. 266).

The next section now discusses the third research question examined in this research in light of previous findings.

### **5.1.3 Language learners' perceptions and attitudes towards a self-regulatory approach to listening comprehension development**

Overall, LP and HP students alike, in this study, provided positive feedback concerning (a) the ability of the pedagogical approach investigated in this study to foster the refinement of their listening skills (as well as their confidence, interest and enjoyment in L2 listening), and concerning (b) the design of the tasks employed in the listening training.

From the point of view of the listening task design, the findings of the present study are consistent with Goh's (e.g. 1997, 2000), Goh & Taib's (2006), Liu & Goh's (2006), Matsumoto's (1996), Vandergrift's (2003b) and Yang's (1999) findings that diary keeping and process-based discussions can play a significant role as a teaching tool for L2 listening, to help learners become more aware of their own learning and of the comprehension processes which they and other students use, and to guide them in evaluating and improving their learning.

These findings add to the weight of evidence from numerous other fields of research, such as Chi, de Leeuw, Chiu & LaVancher's (1994) findings in the fields of biology and physics learning, that eliciting self-explanations (which was achieved in the present study through the use of reflective listening note-book keeping and process-based discussions of

comprehension) enhances learning: that, in particular, it can improve the acquisition of problem-solving skills and lead to a deeper understanding.

In Vandergrift's (2003b, p. 437) study – very similarly to what was documented in the present study – the language learners commented that collaboration with a partner was very useful for verifying comprehension, and that it encouraged deeper reflection on one's comprehension and increased monitoring. They also commented on the motivation and on the feelings of confidence engendered by the success they experienced with this approach, and they commented on the potential of this approach to help them access authentic-type texts and to transfer strategies learnt inside the classroom to situations outside the classroom, and this, in spite of the fact that, as was the case for many of the participants in the present study, the learners in Vandergrift's study possessed a limited proficiency in the target language.

Tertiary-level Chinese ESL students, exposed to a very similar self-regulatory approach to listening as was employed by Vandergrift (2003b) or in the present study, also reported increased listening abilities, strategic knowledge, confidence, and motivation (Liu & Goh, 2006). In the latter study, perfectly consistent with the findings of the present study, the learners' reports included comments such as:

“It was a more efficient way of listening”... “Discussions helped us to check main ideas and details”... “I could get a good comprehension of the text and a clearer structure of the text”... “It enabled me to have a focus first on main ideas, second on details”... “The method makes listening easier, and we become more confident”... “I can concentrate on listening”... “Second listen made me improve a lot”..., and “It makes us more familiar with listening strategies” (Liu & Goh, 2006, pp. 98-99).

As in the present study, many of the students in Liu & Goh's study also "expressed a desire to have more such listening lessons in the future" (Liu & Goh, 2006, p. 98).

The results of this study are also consistent with Goh & Taib's (2006) findings. In the latter study, the elementary school learners exposed to a self-regulatory approach to listening comprehension development similarly reported an increase in their confidence and metacognitive knowledge. It is interesting to note also that, as in the present study, the learners in Goh & Taib's study highlighted the benefits they had derived from the teacher-led discussions which were an integral part of the listening training (p. 228), as was the case also in Vandergrift's (2003b) study.

In the present study, the comparative analysis of the aural excerpts and their transcriptions was one of the post-listening teacher-led activities which were particularly valued by the students in both groups. These findings are consistent with Wilson's (2003) results. Using an approach very similar to that which was examined in the present study with, in his case, Japanese intermediate-level ESL learners, Wilson indeed found that:

"By comparing their problems with the original text, specific knowledge can be learnt (or at least, become available for learning) according to the individual student's difficulties. [In one case described in Wilson's paper] four categories of 'learning points' were raised: 1. Some students found common word combinations that they failed to recognize ... 2. Some discovered how known words actually sounded in context, or in previously unfamiliar collocations... 3. There were also grammatical points and ... vocabulary... that some students were unfamiliar with. 4. In addition, students were able to see exactly where and how some top-down inferencing might have helped to resolve specific problems." (Wilson, 2003, p. 340).

Yang's (1999) study of ESL learners in Taiwan, for its part, suggested that cyclical relationships likely exist among learners' metacognitive awareness, their motivation, and

their strategy use: “It seems that appropriate strategy use will lead to enhanced self-perception of language proficiency and, in turn, increases motivation.” (Yang, 1999, p. 531).

The participants in Jensen & Vinther’s (2003, p. 415) study similarly displayed “a very positive attitude... and expressed enthusiasm toward the opportunity to listen to the experimental fragments [several times]...”.

As remarked by Jensen and Vinther:

“Contrary to other kinds of repetition, exact repetition is a modification device that is relatively infrequent in natural interaction, but... it enhances the degree to which learners are exposed to input, promoting in this way their abilities to notice formal features... On the basis of data collected through dictation, with written responses, Cervantes (1983) observed that exact repetition of the cue sentence facilitated comprehension on both morpheme and “equivalent meaning measures” and concluded that the “probable effect of repetition is that, when the input is slightly out of the listener’s grasp, a second pass at the input allows the listener to make more accurate hypotheses in decoding the message”... [Based on the positive results of their study into the effects of task repetition on linguistic *output*,] Gass, Mackey, Alvarez-Torres and Fernandez-Garcia (1999) similarly suggested that... with repetition..., the learner [who is originally constrained by the limits of working memory], after having attended to meaning, and probably also after having become aware of form problems, in a second encounter with the same utterance, is freed to attend to its form rather than to its content.” (Jensen & Vinther, 2003, pp. 374-375 & 378-379).

Reflecting on the positive effects of his ‘discovery listening’ approach (which, as was previously mentioned, is very similar to that examined in the present study) on the development of his students’ listening skills, Wilson (2003) remarked, similarly to Jensen and Vinther, that:

“Certainly, the activity requires students to concentrate on bottom-up accuracy to a degree that would be unnecessary in real life. But this forces [the listeners’] attention on what they might otherwise miss. Numerous small misperceptions are not necessarily trivial, and seem to have a cumulative effect. They also appear to slow down learners’ ability to do top-down processing.” (Wilson, 2003, pp. 341-342).

The results of this study concur with Jensen & Vinther's and Wilson's observations, and they support the validity of their conceptions of L2 listening development.

The following section examines the principal implications of this study.

## **5.2 Principal implications of the findings of this study**

This section provides a summary of the principal implications of the findings of this study from the theoretical, pedagogical, and methodological stand points.

From a theoretical perspective, the results of this study are compatible with the claims that (1) metacognition, (2) self-regulation, (3) strategy use, (4) domain knowledge such as automatic L2 word recognition skills, and (5) the frequency of processing and 'noticing' / attention play crucial roles in the processing of L2 data (Ellis, 2001; Flavell, 1979; Holec, 1981; Hulstijn, 2001, 2003; Leow, 2000; Rivers, 2001; Robinson, 1995, 2001, 2002; Schmidt, 1990; Segalowitz, 2000; Segalowitz & Segalowitz, 1993; Wenden, 1999).

From the pedagogical point of view, the results of this study lend strong support to Goh's claims that the L2 "learner's voice can be very valuable to our understanding of their comprehension difficulties" (Goh, 2000, p. 56 ), and that a self-regulatory approach to listening development through text repetition, reflective listening note-book keeping, and process-based discussions can have highly beneficial effects on the development of learners' listening comprehension skills.

It is important nonetheless to point out that the researcher's classroom observation data, in the present study, revealed that, in order for a self-regulatory listening training program to be successful, at least two fundamental conditions must be met.

The first of these conditions was identified by Victori & Lockhart (1995). Based on their empirical findings concerning metacognition enhancement in language learning, these researchers cautioned and explained that:

“Some learners reject self-directed language learning until they discover its advantages (Holec, 1981) and start to feel comfortable with it... As Cranstone and Baird (1988) have stated, *the learner must perceive immediate practical applications* (italics mine)...if the learner does not understand how and why all this extra involvement in and responsibility for his own learning is going to optimize his investment of time and effort, he may feel bewildered by it all. Early enhanced macrostrategies and a feeling of increased expertise in language learning often demonstrate how and why self-directed language learning works. That is, confrontation of initial metacognition with new concepts often leads the learner to increase his repertoire of strategies and skills, and to feel that he is a bit more of an “expert” at language learning. If he successfully applies some of these new insights to a task, this feeling of increased “expertise” is reinforced, often increasing his motivation and self-esteem. Furthermore, the quality of learning is enhanced upon perceiving the process as his own. In turn, gains in motivation, self-esteem and quality of learning tend to accelerate the rate of progress. Thus, it is important that the learner perceive these gains before uneasiness with the system leads him to reject self-directed language learning. Aside from perceiving the advantages of self-directed language learning, the learner must also feel comfortable with it. A perception that “this is tailored to me” will usually be a positive affective factor... Perceiving ... teacher and peer support early goes a long way in helping the learner feel comfortable with the system.” (Victori & Lockhart, 1995, p. 232).

The results of the present study suggest that the task design adopted for this research not only fostered the language learners' metacognitive awareness, self-regulatory abilities, strategy use, and listening skills development, but also, their self-confidence, interest and motivation. These findings are consistent with Victori & Lockhart's results. Moreover, although space

limitations did not allow for the presentation of the classroom observation data gathered throughout this study, these observation data also suggest that the task design adopted in this study enabled the learners to experience the “immediate practical applications” of this method – as Victori and Lockhart cautioned was important – from the very first listening activity conducted (evidence of the immediate practical effects of this method can be found also in some of the students’ stimulated recall data: see, for example, John’s protocols on item 39, section 4.1.3, where this student recalls his reaction in the very first class listening exercise, when the beginning-of-study think-aloud task pertaining to chess was discussed in detail). The fact that the students were able to experience the “immediate practical applications” of this method may help explain, in part at least, why LP and HP learners alike responded positively to, and persevered with the self-regulatory method.

The findings of this study suggest that a second condition which must be met in order for a self-regulatory listening training program such as that which was investigated in the present study to be successful is teacher support of the students’ self-regulated learning efforts, and teacher expertise in the selection of the listening tasks.

Wilson (2003) pointed out that:

*“Students will not be motivated if the listening text is at the wrong level... (italics mine). Without some sort of grading of listening texts, students will almost always be forced to use top-down contextual guesswork. To avoid this, we need to find a middle way between the students focusing on form and focusing on meaning by grading the listening texts. This is admittedly a complex and subtle skill, but ... as long as the students’ levels are relatively homogeneous..., it is possible to grade the texts successfully. Naturally, this does require teachers to have a certain ‘feel’ for task, based on experience with the students, but it [is this ability which] makes teachers so valuable to learners.”* (Wilson, 2003, p. 341).

Further discussing his positive findings, Wilson stated that:

“...there may be a novelty factor. But in general, as long as the level of the text is appropriate, the task seems to satisfy a basic human instinct towards problem solving (Piaget in Brown, 2000). If ‘noticing’ really is an important part of the learning process, then motivating students’ attention may be one of the keys to improvement.” (Wilson, 2003, pp. 340-341).

In this study, the students’ summative report data and the researcher’s observation data closely concur in suggesting that the instructor-directed reinforcement and reinvestment activities conducted immediately subsequently to the repeated listening proved highly valuable to the learners in both the HP and the LP groups. These activities included the comparative analysis of the aural excerpts and their transcriptions from points of view such as phonology / pronunciation, vocabulary, usage, grammar, spelling, as well as further discussions of the comprehension difficulties encountered, and whenever possible, brief oral debates on the topic of the aural texts, aimed at enabling the students to immediately reuse and hopefully “anchor” the new vocabulary encountered in the listening tasks in spontaneous oral interaction.

Although this study did not focus in any formal manner on the examination of the learners’ vocabulary acquisition, it is noteworthy that many of the students reported that they had perceived that they had made gains in their lexical knowledge as a result of the intensive listening training. It is noteworthy also that, in the LP group, the comparative analyses of the students’ beginning- and end-of-study think-aloud data suggested a marked improvement in the automatization of the students’ word recognition skills in this nine week period.

These unexpected findings are consistent with the extensive recent evidence, from the field of L2 reading research in particular, that the *quality of processing* (such as rehearsal and elaboration to establish word form-meaning links, the opportunity to negotiate word meanings interactively with other learners, and the opportunity to produce new lexical items communicatively) as well as the *quantity of processing* (such as repeated exposure or a particularly salient exposure to new words) can lead to what is commonly referred to as *incidental vocabulary acquisition* while the learner is focused on comprehending meaning, rather than on the explicit goal of learning new words (Wesche & Paribakht, 1996, p. 32; Wesche & Paribakht, 1999, pp. 176 & 179). This empirical evidence has prompted Hulstijn to contend that:

“...learners should relisten to oral texts until they recognize all words... [because] The more a learner pays attention to a word’s morphonological, orthographic, prosodic, semantic and pragmatic features and to intraword and interword relations, the more likely it is that the new lexical information will be retained... [and because] For speech comprehension to be successful, word recognition processes have to take place automatically... so that the listener can be focused exclusively on the interpretation of the information conveyed by the message.” (Hulstijn, 2001, pp. 286, 285 & 264).

The data in this study suggest that the participating instructors’ support of their respective students’ self-regulated learning efforts, and, as similarly documented by Wilson, the instructors’ ability to provide the learners with a judicious balance of aural texts *at* their proficiency level (to allow them to experience success at least some of the time, and to thus hopefully sustain their motivation and confidence) and slightly *beyond* their proficiency level (in this case, to challenge them to set higher goals, to deploy greater efforts, and to thus hopefully foster the development or refinement of their listening skills) played an important role in the encouraging results which were documented. All sources of data in this study

indicate that the judicious choice of listening texts, in particular, is indispensable to the success of any L2 listening training.

The value perceived in the reinvestment activities by students and researcher alike lends strong support, moreover, to Jensen & Vinther's (2003, p. 419) argument that: "Listening training should not be a stand-alone activity but should instead be seen as a supplementary phase of individual contact with the ... language during which the student should be allowed to indulge in hypothesis work regarding all the linguistic features".

The results of the present study likewise underscore the pertinence of Goh & Taib's (2006) recommendations "... [to use] a variety of methods which include reflection and discussion, teacher modeling, integrated sequences of activities that focus alternatively on text and process, as well as perception practice that facilitates recognition of segments of speech." (Goh & Taib, 2006, p. 230-231).

Finally, from the methodological point of view, the findings of the present study underscore the value of a multi-source, multi-method interpretive qualitative research design such as that recommended by Davis (1995) in the investigation of the chiefly covert processes underlying L2 listening comprehension. Each of the instruments which were used in this study made a unique contribution in providing insights into the research questions of interest, while compensating for the weaknesses of a different instrument and confirming the data elicited through yet another method or another source.

A metacognitive and strategic awareness listening questionnaire such as the one which was used in this study can quickly and efficiently provide a vast amount of organized data on the cognitive processes and behaviours of interest, and the repeated administrations of such a questionnaire can enable a researcher to observe the evolution over time in those listening processes and behaviours of interest.

Stimulated recall sessions immediately following these questionnaire administrations can, in turn, provide indispensable *corroborative* and invaluable *explanatory* data concerning listeners' numerical answers. For example: in the present study, the increase in the use of literal translation, or the very low use of comprehension verification reported in her beginning-of-study numerical questionnaire data by Helen (the HP student who displayed the highest levels of metacognitive awareness, self-regulation, judicious strategy use, lexical knowledge and overall listening comprehension) could have appeared surprising, even counter-intuitive, based on all empirical evidence previously outlined in Chapter II. Crucially however, the stimulated recall data shed light on the facts that (1) this student did in fact perceive that she was using literal translation increasingly, but for the specific purpose of comprehension verification; nevertheless, (2) this student also interpreted the term "translate" in a wider sense than is usual; furthermore, (3) this student greatly underestimated her use of comprehension verification, as a result of a lack of awareness of this strategic behaviour in her approach to listening. Similarly, this same student had greatly underestimated her use of mental visualization, as a result, once again – as the mid-study stimulated recall allowed her to explain – of an absence of awareness of the use of this strategic technique. It is noteworthy that Helen, and a number of the other students in both groups in this study, frequently reported that the first completion of the questionnaire, and

the first think-aloud task, had prompted them to further reflect on many of the questionnaire items and on their verbal report of their comprehension in the think-aloud task, over the course of the following class exercises. These testimonies underscore the value of these instruments themselves for stimulating L2 listeners' metacognitive awareness and self-regulation.

For their part, the listening note-books (informal listening diaries) which were utilized in this study, in addition to proving helpful to many of the learners in their listening skills development, provided unique insights into the research questions of interest by supplying further corroborative evidence of the cognitive processing and behaviours reported by the participants in their numerical and stimulated recall questionnaire data, in the form of numerous concrete examples of processing and comprehension at every step of each of the three listens conducted as part of the listening exercises.

The concurrent think-aloud methodology, for its part, provided invaluable insights into numerous detailed aspects of the learners' L2 listening comprehension, and proved indispensable to gain insights, in particular, into the highly complex interrelationships among metacognitive, self-regulatory, strategic, lexical and phonological knowledge in L2 listening comprehension. Similarly to the stimulated recall methodology, the think-aloud methodology provided crucial explanatory as well as corroborative data. In the case of the low-proficiency group in this study for example, not only did the participants' think-aloud protocols provide *concrete confirmatory evidence* of a considerable improvement in the learners' listening comprehension abilities in French, but they also provided *detailed explanations of the*

*reasons why* these learners were able to reach a higher level of success in the final think-aloud task.

The open-ended questionnaires (referred to in this study as summative reports) which were utilized at the very end of the research allowed all students and instructors who participated in the listening training examined in this study to further explain, and to further confirm or qualify the findings elicited through the numerical and stimulated recall questionnaire data, the listening note-books, and the think-alouds techniques in their own words, and to justify their answers with additional concrete examples from their personal experience.

Finally, although space limitations did not allow the researcher to present the data from the observation sessions, this methodology also provided a wealth of corroborative and explanatory data, and valuable further insights into all three research questions.

In sum, in the case of the participants in this study, who were of adult age and whose L1 and L2 languages of reporting were both familiar to the researcher, a multi-method, multi-source interpretive qualitative research design – including, in particular, the stimulated recall and think-aloud methodologies – enabled the researcher to ensure credibility, dependability, detail, and rigour in the investigation of the covert processes underlying L2 listening comprehension.

### 5.3 Recommendations for future research

The positive results obtained in the present study, as in the few other studies which have recently examined the effects of a metacognitive awareness-raising / self-regulatory approach to L2 listening development, clearly suggest that this pedagogical approach deserves further investigation with a variety of larger learner samples, under controlled conditions.

Among the many questions raised by this and related research studies are (1) the suitability of this pedagogical approach for learners of (a) varying ages, (b) varying proficiency levels, and (c) varying learning styles and educational traditions, (2) the proportional importance which such listening training should be awarded within a language learning curriculum (a) at varying levels of proficiency, and (b) given varying degrees of native to target language relatedness, and (3) the versatility with which this pedagogical method could be integrated within electronically accessible materials. Among the many other questions raised by this and related research studies are also (4) the extent to which, based on controlled experiments, and compared with other listening development methods, this particular method can foster (a) language learners' lexical knowledge acquisition, (b) the automatization of word recognition skills, and (c) the overall rate of language acquisition. Equally important questions include (5) the extent to which instructors possess the skills necessary to select listening tasks at appropriate levels of difficulty for their students, and (6) the extent to which teacher education programs equip future language instructors with the skills necessary to select listening tasks at appropriate levels of difficulty for their students.

#### 5.4 Contribution and limitations of this study

Many careful precautions were taken in the collection of the data in this study. Nevertheless, in light of the small scale of this research project, and of the human limitations inherent to the reporting and investigation of the essentially covert processes underlying L2 listening comprehension, the results presented here should be understood as only suggestive of trends and patterns in language learners' listening comprehension processes.

It is important to keep in mind that, from the outset, the participants in this study exhibited high levels of instrumental or intrinsic motivation. It should also be remembered that all students reported having perceived that the listening questionnaire and the think-aloud procedure exerted a positive influence on their metacognitive awareness, strategy use, and self-regulation. These motivational and research-related factors unquestionably contributed to the positive results documented in the present study. The findings of this study should thus be interpreted as distinct possibilities which will need to be validated in other language learning contexts.

The new evidence which this research brings to light and the encouraging corroborating evidence which the study provides make a useful contribution to the small but growing body of promising new research into L2/FL listening skill development. Particularly note-worthy among the new evidence which this research brings to light is the finding that complex interrelationships exist among language learners' lexical knowledge, phonological skills, metacognitive awareness, self-regulatory abilities, and their strategy knowledge and use which can exert fundamental effects on the level of accuracy and completeness which they

attain in listening comprehension. From the pedagogical point of view, one of the most valuable findings to emerge from this study is that a metacognitive awareness-raising, self-regulatory approach to listening comprehension development through text repetition, note-book keeping, and process-based discussions can have highly beneficial effects on the listening comprehension development of low-proficiency, mature adult learners of a second language, including in cases when the learners appear to have pronounced phonological recognition difficulties. This study provides precise and detailed inventories of the components of metacognitive, self-regulatory, and strategic knowledge, and of personal characteristics which need to be developed in L2/FL listeners. This study also contributes to our keener understanding of the strengths and weaknesses of each of the instruments which have traditionally been utilized in L2 listening comprehension research, to our keener understanding of the value of thus far lesser-used instruments such as the stimulated recall methodology, and to our keener understanding of the value of using the appropriate instruments in a complementary manner in order to enhance the level of credibility, dependability, and explanatory detail of research findings through rigorous data triangulation.

## **5.5 Conclusion**

As Lynch and Mendelsohn remarked: “The fact that listening comprehension occurs largely unobserved means that it can be very difficult to establish the ‘process’ by which listeners reach their interpretations, even if we have the evidence of the ‘product’... Until the teacher is provided with some sort of method of investigating the student’s problems, the teacher is

really not in a position to help the student ‘do better’ (Brown, 1986, p. 286).” (Lynch & Mendelsohn, 2002, p. 202).

This study suggests that the method recommended by Field (e.g. 1998), Liu and Goh (2006), Vandergrift (e.g. 2003b) and the few other researchers who have recently investigated awareness-raising / self-regulatory approaches to L2 listening development offers one viable solution to the central problem underscored by Brown, Lynch, and Mendelsohn.

Consistent with the findings of researchers such as Goh, Vandergrift, or Victori and Lockhart, the results of this study suggest that a self-regulatory approach to L2 listening comprehension development can have highly beneficial effects on both low- and high-proficiency learners’ metacognitive awareness, self-regulatory abilities, and strategy use, as well as on their self-confidence, interest and enjoyment in L2 listening. In the case of the low-proficiency students in this study, the results further suggest that this method can have highly beneficial effects on the level of accuracy and completeness attained in listening comprehension.

## REFERENCES

- Alcalay, L. (2002). *The phenomenological interview: Exploring awareness of second language learning in the international ESL college student community*. Unpublished doctoral dissertation, University of Massachusetts, Amherst.
- Alderson, J. (1992). Guidelines for evaluation of language education. In J. Alderson & A. Beretta (Eds.), *Evaluating second language education* (pp. 275-299). Cambridge: Cambridge University Press.
- Allan, A. (1995). Begging the questionnaire: instrument effect on readers' responses to a self-report checklist. *Language Testing*, 12, 133-156.
- Allwright, R. L. (1988). Autonomy and individualization in whole-class instruction. In A. Brookes & P. Grundy (Eds.), *Individualization and autonomy in language learning* (pp. 35-44). London: Modern English Publications and the British Council.
- Anderson, J. (1983). *The architecture of cognition*. Cambridge, MA: Harvard University Press.
- Anderson, J. (1985). *Cognitive psychology and its implications* (2nd ed.). New York: Freeman.
- Bacon, S. (1992a). The relationship between gender, comprehension, processing strategies, and cognitive and affective response in second-language listening. *Modern Language Journal*, 76, 160-178.
- Bacon, S. (1992b). Phases of listening to authentic input in Spanish: A descriptive study. *Foreign Language Annals*, 25, 317-334.
- Bailey, K. M. (1990). The use of diary studies in teacher education programs. In J. C. Richards & D. Nunan (Eds.), *Second language teacher education* (pp. 215-226). New York: Cambridge University Press.
- Benson, P. (2006). Autonomy in language teaching and learning: State of the art. *Language Teaching*, 40, 21-40.
- Benson, P. & Lor, W. (1999). Conceptions of language and language learning. *System*, 27, 459-472.
- Block, D. (1998). Exploring interpretations of questionnaire items. *System*, 26, 403-425.
- Boekaerts, M. (1999). Self-regulated learning. *International Journal of Educational Research*, 31, 445-551.

- Boekaerts, M., Pintrich, P. & Zeidner, M. (2000). *Handbook of self-regulation*. San Diego, CA: Academic Press.
- Bolitho, R., Carter, R., Hugues, R., Ivanic, R., Masuhara, H. & Tomlison, B. (2003). Ten questions about language awareness. *ELT Journal*, 57, 251-260.
- Bowles, M. A. & Leow, R. P. (2005). Reactivity and type of verbal report in SLA research methodology: Expanding the scope of investigation. *Studies in Second Language Acquisition*, 27, 415-440.
- Brophy, J. (2005). Goal theorists should move on from performance goals. *Educational Psychologist*, 40, 167-176.
- Brown, G. (1995). Dimensions of difficulty in listening comprehension. In D. Mendelsohn & J. Rubin (Eds.), *A guide for the teaching of second language listening* (pp. 59-73). San Diego: Dominic Press.
- Brown, H. D. (2000). *Principles of language learning and teaching* (4th ed.). White Plains, NY: Longman.
- Brown, J. D. (2001). *Using surveys in language programs*. Cambridge, UK: Cambridge University Press.
- Brown, J. D. & Rodgers, T. S. (2002). *Doing second language research*. Oxford University Press.
- Butler, D. & Winne, P. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research*, 65, 245-282.
- Bygate, M., Skehan, P. & Swain, M. (Eds.). (2001). *Researching pedagogic tasks: Second language learning, teaching and testing*. London, UK: Longman.
- Call, M. (1985). Auditory short-term memory, listening comprehension and the input hypothesis. *TESOL Quarterly*, 19(4), 765-781.
- Candlin, C. N. (2001). Afterword: Taking the curriculum to task. In M. Bygate, P. Skehan & M. Swain (Eds.), *Researching pedagogic tasks: Second language learning, teaching and testing* (pp. 229-243). London, UK: Longman.
- Carroll, J. (1965). The prediction of success in foreign language training. In R. Glaser (Ed.), *Training, research and education* (pp. 87-136). New York: Wiley.
- Cervantes, R. (1983). *Say it again, Sam: The effect of repetition on dictation scores*. Unpublished term paper, University of Hawai'i at Manoa.
- Chambers, G. (1996). Listening. Why? How? *Language Learning Journal*, 14, 23-27.

- Chamot, A. U., Barnhardt, S., El-Dinary, P. B. & Robbins, J. (1999). *The learning strategies handbook*. White Plains, NJ: Longman.
- Chapelle, C. A. & Duff, P. A. (2003). *Research issues*. TESOL Quarterly, 37, 157-178.
- Chaudron, C. (1988). *Second language classroom: Research on teaching and learning*. Cambridge: Cambridge University Press.
- Chaudron, C. (2003). Data collection in SLA research. In C. Doughty & M. Long (Eds.), *The handbook of second language acquisition* (pp. 762-828). Oxford: Blackwell.
- Chi, M., de Leeuw, N., Chiu, M. & LaVancher, C. (1994). Eliciting self-explanations improves understanding. *Cognitive Science*, 18, 439-437.
- Cohen, A. (1996). Verbal reports as a source of insights into second language learner strategies. *Applied Language Learning*, 7, 5-24.
- Cohen, A. (1998). *Strategies in learning and using a second language* (Chap. 3: Methods for investigating language learning and language use strategies - pp. 24-64). London: Longman.
- Cohen, A. D. (2000). Exploring strategies in test-taking: Fine-tuning verbal reports from respondents. In G. Ekbatani & H. Pierson (Eds.), *Learner-directed assessment in ESL* (pp. 127-150). Mahwah, NJ: Lawrence Erlbaum.
- Cornaire, C. (1998). *La compréhension orale*. Paris: CLE International.
- Cotterall, S. (1999). Key variables in language learning: What do learners believe about them? *System*, 27, 493-513.
- Coulthard, R. M. (1985). *An introduction to discourse analysis*. London: Longman.
- Cranstone, R. & Baird, J. (1988). An integrative perspective on metacognition. *Australian Journal of Reading*, 11, 238-245.
- Creswell, J. (1998). *Qualitative inquiry and research design*. Thousand Oaks, CA: Sage.
- Creswell, J. W. (2002). *Research design: Qualitative, quantitative and mixed methods approaches*. (2nd ed.). Thousand Oaks, CA: Sage.
- Cutler, A. (2000/01). Listening to a second language through the ears of a first. *Interpreting*, 5, 1-24.
- Davis, K. A. (1995). Qualitative theory and methods in applied linguistics research. *TESOL Quarterly*, 29, 427-453.

- Davis, K. A. (1998). Validity and reliability in qualitative research on second language acquisition and teaching. *TESOL Quarterly* 32, 602-608.
- De Groot, E. V. (2002). Learning through interviewing: Students and teachers talk about learning and schooling. *Educational Psychologist*, 37, 41-52.
- Delabatie, B. & Bradley, D. (1995). Resolving word boundaries in spoken French: Native and nonnative strategies. *Applied Psycholinguistics*, 16, 59-81.
- Dennett, D. (1987). *The intentional stance*. Cambridge, MA: MIT Press.
- Dörnyei, Z. (2001). *Teaching and researching motivation*. Harlow: Longman.
- Dörnyei, Z. (2003). *Questionnaires in second language research: Construction, administration, and processing*. Mahwah, NJ: Lawrence Erlbaum.
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: Lawrence Erlbaum.
- Dörnyei, Z. & Skehan, P. (2003). Individual differences in second language learning. In C. Doughty & M. Long (Eds.), *Handbook of second language acquisition* (pp. 589-630). Blackwell.
- Doughty, C. & Long, M. (2003). *The handbook of second language acquisition*. Blackwell.
- Dufva, M. & Voeten, M. (1999). Native language literacy and phonological memory as prerequisites for learning English as a foreign language. *Applied Psycholinguistics*, 20, 329-348.
- Dunkel, P. A. (1991). Listening in the native and second/foreign language: Toward an integration of research and practice. *TESOL Quarterly*, 25, 431-457.
- Eastman, J. K. (1991). Learning to listen and comprehend: The beginning stages. *System*, 19, 179-187.
- Eastman, J. K. (1993). C-words and F-words: The importance of distinguishing content and function in teaching second language listening comprehension. *System*, 21, 495-502.
- Edge, J. & Richards, K. (1998). May I see your warrant, please?: Justifying outcomes in qualitative research. *Applied Linguistics*, 19, 334-356.
- Ehrman, M. (2000). Affect, cognition, and learner self-regulation in second language learning. In O. Kagan & B. Rifkin (Eds.), *The learning and teaching of Slavic languages and cultures: Towards the 21st century* (pp. 109-133). Bloomington, IN: Slavica.

- Ehrman, M., Leaver, B. L. & Oxford, R. (2003). A brief overview of individual differences in second language learning. *System*, 31, 313-330.
- Eilam, B. & Aharon, I. (2003). Students' planning in the process of self-regulated learning. *Contemporary Educational Psychology*, 28, 304-334.
- Ellis, N. (2001). Memory for language. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 33-69). Cambridge: Cambridge University Press.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford University Press.
- Erickson, F. (1986). Qualitative methods in research on teaching. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 119-161). New-York: Collier-Macmillan.
- Ericsson, K. A. (2002). Towards a procedure for eliciting verbal expression of non-verbal experience without reactivity: Interpreting the verbal overshadowing effect within the theoretical framework for protocol analysis. *Applied Cognitive Psychology* 16, 981-987.
- Ericsson, K. A. & Simon, H. A. (1987). Verbal reports on thinking. In K. Færch & G. Kasper (Eds.), *Introspection in second language research* (pp. 24-53). Clevedon, U.K: Multilingual Matters.
- Ericsson, K. A. & Simon, H. A. (1993). *Protocol analysis: Verbal reports as data* (2nd ed.). Cambridge, MA: MIT Press.
- Ericsson, K. A. & Simon, H. A. (1996). *Protocol analysis: Verbal reports as data* (3rd ed.). Cambridge, MA: MIT Press.
- Færch, C. & Kasper, G. (1986). The role of comprehension in second language learning. *Applied Linguistics*, 7, 257-274.
- Færch, C. & Kasper, G. (1987). From product to process - Introspective methods in second language research. In K. Færch & G. Kasper (Eds.), *Introspection in second language research* (pp. 1-23). Clevedon, U.K: Multilingual Matters.
- Fernandez-Duque, D., Baird, J. & Posner, M. (2000a). Executive attention and metacognitive regulation. *Consciousness and Cognition*, 9, 288-307.
- Fernandez-Duque, D., Baird, J. & Posner, M. (2000b). Awareness and metacognition. *Consciousness and Cognition*, 9, 324-326.
- Feyten, C. (1991). The power of listening ability: an overlooked dimension in language acquisition. *The Modern Language Journal*, 75, 173-180.
- Field, J. (1998). Skills and strategies: Towards a new methodology for listening. *ELT Journal*, 52, 110-118.

- Field, J. (1999). "Bottom-up" and "top-down". *ELT Journal*, 53, 338-339.
- Field, J. (2000). Not waving but drowning: a reply to Tony Ridgway. *ELT Journal*, 54, 186-195.
- Field, J. (2003). Promoting perception: lexical segmentation in second language listening. *ELT Journal*, 57, 325-334.
- Field, J. (2005). Intelligibility and the listener: The role of lexical stress. *TESOL Quarterly*, 39, 399-423.
- Field, J. (2007). Looking outwards, not inwards. *ELT Journal*, 61, 30-38.
- Flavell, J. (1979). Metacognition and cognitive monitoring: A new area of cognitive developmental inquiry. *American Psychologist*, 34, 906-911.
- Fraenkel, J. R. & Wallen, N. E. (2003). *How to design and evaluate research in education* (5th ed.). Boston: McGraw-Hill.
- Gagné, E. D., Yekovitch, C. W. & Yekovitch, F. R. (1993). *The cognitive psychology of school learning* (2nd ed.). New York: Harper Collins.
- Gass, S. & Mackey, A. (2000). *Stimulated recall methodology in second language research*. Mahwah, NJ: Erlbaum.
- Gass, S., Mackey, A., Alvarez-Torres, M. J. & Fernandez-Garcia, M. (1999). The effects of task repetition on linguistic output. *Language Learning*, 49, 549-581.
- Gazzaniga, M. (1998, July). The split-brain revisited. *Scientific American*, 51-55.
- Gernsbacher, M. A. Varner, K & Faust, M. (1990). Investigating differences in general comprehension skill. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 16(3), 430-445.
- Gillham, B. (2000). *Developing a questionnaire*. London: Continuum.
- Goh, C. (1997). Metacognitive awareness and second language listeners. *ELT Journal*, 51, 361-369.
- Goh, C. (1998). Strategic processing and metacognition in second language listening. Ph.D. Dissertation, Lancaster University, U.K.
- Goh, C. (2000). A cognitive perspective on language learners' listening comprehension problems. *System*, 28, 55-75.

- Goh, C. (2002a). Exploring listening comprehension tactics and their interaction patterns. *System*, 30, 185-206.
- Goh, C. (2002b). *Teaching listening in the language classroom*. Singapore: SEAMEO Regional Language Centre.
- Goh, C. & Taib, Y. (2006). Metacognitive instruction in listening for young learners. *ELT Journal*, 60, 222-232.
- Graham, S. (2006). Listening comprehension: The learners' perspective. *System*, 34, 165-182.
- Gubrium, J. F. & Holstein, J. A. (2002). *Handbook of interview research: Context and method*. Thousand Oaks, CA: Sage.
- Hoeflaak, A. (2004). Computer-assisted training in the comprehension of authentic French speech: A closer view. *Computer Assisted Language Learning*, 17, 315-337.
- Holec, H. (1981). *Autonomy and foreign language learning*. Council of Europe. Oxford: Pergamon Press.
- Horwitz, E. (1988). The beliefs about language learning of beginning university foreign language students. *Modern Language Journal*, 72, 283-294.
- Hulstijn, J. (2001). Intentional and incidental second language vocabulary learning: a reappraisal of elaboration, rehearsal and automaticity. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 258-287). Cambridge: Cambridge University Press.
- Hulstijn, J. (2003). Connectionist models of language processing and the training of listening skills with the aid of multimedia software. *Computer Assisted Language Learning*, 16, 413-425.
- Jaccoud, M. & R. Mayer (1997). L'observation en situation et la recherche qualitative. In J. Poupart, J. P. Deslauriers, L. H. Groulx, A. Laperrière, R. Mayer & A. P. Pires (Eds.), *La recherche qualitative : Enjeux épistémologiques et méthodologiques* (pp. 212-249). Montréal: Gaëtan Morin.
- Jensen, E. D. & Vinther, T. (2003). Exact repetition as input enhancement in second language acquisition. *Language Learning*, 53, 373-428.
- Just, M. & Carpenter, P. (1992). A capacity theory of comprehension: Individual differences in working memory. *Psychological Review*, 87, 329-354.
- Kasper, G. (1998). Analysing verbal protocols. *TESOL Quarterly* 32, 358-362.

- Kintsch, W. (1998). *Comprehension: A paradigm for cognition*. New York: Cambridge University Press.
- Koda, K. (1996). L2 word recognition research: A critical review. *Modern Language Journal*, 80, 450-460.
- Larsen-Freeman, D. (2001). Individual cognitive / affective learner contributions and differential success in SLA. In M. P. Breen (Ed.), *Learner contributions to language learning: New directions in research* (pp. 12-24). London: Longman.
- Larsen-Freeman, D. & Long, M. H. (1991). *An introduction to second language acquisition research* (Chap. 2: Second language acquisition research methodology, pp. 10-51). New-York: Longman.
- Lazaraton, A. (1995). Qualitative research in applied linguistics: A progress report. *TESOL Quarterly* 29, 455-472.
- Lazaraton, A. (2000). Current trends in research methodology and statistics in applied linguistics. *TESOL quarterly*, 34, 175-181.
- Lazaraton, A. (2003). Evaluative Criteria for Qualitative Research in Applied Linguistics: Whose Criteria and Whose Research? *The Modern Language Journal*, 87(1), 1-12.
- Leow, R. (1997). Attention, awareness and foreign language behavior. *Language Learning*, 47, 467-505.
- Leow, R. (2000). A study of the role of awareness in foreign language behavior: Aware versus unaware learners. *Studies in Second Language Acquisition*, 22, 557-584.
- Leow, R. & Morgan-Short, K. (2004). To think-aloud or not to think-aloud: The issue of reactivity in SLA research methodology. *Studies in Second Language Acquisition*, 26, 35-57.
- Lindfield, K., Wingfield, A. & Goodglass, H. (1999). The contribution of prosody to spoken word recognition. *Applied Psycholinguistics*, 20, 395-405.
- Liu, X. L. & Goh, C. (2006). Improving second language listening: Awareness and involvement. In T. S. C. Farrell (Ed.), *Language teacher research in Asia*. Alexandria, VA: TESOL.
- Long, D. R. (1990). What you don't know can't help you: An exploratory study of background knowledge and second listening comprehension. *Studies in Second Language Acquisition*, 12, 65-80.
- Lynch, T. (1996). *Communication in the language classroom*. Oxford University Press, Oxford.

- Lynch, T. (1997). Life in the slow lane: Observations of a limited L2 listener. *System*, 25, 385-398.
- Lynch, T. (1998). Theoretical perspectives on listening. *Annual Review of Applied Linguistics*, 18, 3-19.
- Lynch, T. (2002). Listening: Questions of level. In R. Kaplan (Ed.), *Oxford handbook of applied linguistics* (pp. 39-48). New York: Oxford University Press.
- Lynch, T. & Mendelsohn, D. (2002). Listening. In N. Schmitt (Ed.), *An introduction to applied linguistics* (pp. 193-210). London: Arnold.
- Mackey, A. & Gass, S. (2005). *Second language research: Methodology and design*. Mahwah, NJ: Erlbaum.
- Mantle-Bromley, C. (1995). Positive attitudes and realistic beliefs: Links to proficiency. *Modern Language Journal*, 79, 372-386.
- Mareschal, C. (2002). *A cognitive perspective on the listening comprehension strategies of second language learners in the intermediate grades*. Unpublished Master's thesis, University of Ottawa.
- Mason, J. (1996). *Qualitative researching*. London: Sage.
- Matsumoto, K. (1993). Verbal-report data and introspective methods in second language research: State of the art. *RELC Journal: A Journal of Language Teaching and Research in Southeast Asia*, 24, 32-60.
- Matsumoto, K. (1996). Helping L2 learners reflect on classroom learning. *ELT Journal*, 50, 143-149.
- McLaughlin, B., Rossman, T. & McLeod, B. (1983). Second language learning: an information-processing perspective. *Language Learning*, 33, 135-58.
- Mendelsohn, D. (1994). *Learning to listen: A strategy-based approach for the second language learner*. San Diego, Dominic Press.
- Mendelsohn, D. (1998). Teaching listening. *Annual Review of Applied Linguistics*, 18, 81-101.
- Mills, J. (2001). Self-construction through conversation and narrative in interviews. *Educational Review*, 53, 285-301.
- Mokhtari, K. & Reichard, C. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology*, 94, 249-259.

- Mori, Y. (1999). Epistemological beliefs and language learning beliefs: What do language learners believe about their language learning? *Language Learning*, 49, 377-415.
- Munro, M., Derwing, T. M. & Morton, S. L. (2006). *Studies in Second Language Acquisition*, 28, 111-131.
- Nassaji, H. (2004). The relationship between depth of vocabulary knowledge and L2 learners' lexical inferencing use and success. *Canadian Modern Language Review*, 61, 107-134.
- Norris, D., Cutler, A., McQueen, J. M., & Butterfield, S. (2006). Phonological and conceptual activation in speech comprehension. *Cognitive Psychology*, 53, 146-193.
- O'Malley, J., Chamot, A., Stewner-Manzanares, G., Küpper, L. & Russo, R. (1985a). Learning strategies used by beginning and intermediate ESL students. *Language Learning*, 35, 21-46.
- O'Malley, J., Chamot, A., Stewner-Manzanares, G., Russo, R. & Küpper, L. (1985b). Learning strategy applications with students of English as a second language. *TESOL Quarterly*, 19, 285-96.
- O'Malley, J., Chamot, A. & Walker, C. (1987). Some applications of cognitive theory to second language acquisition. *Studies in Second Language Acquisition*, 9, 287-306.
- O'Malley, J., Chamot, A. & Küpper, L. (1989). Listening comprehension strategies in second language acquisition. *Applied Linguistics*, 10, 418-37.
- O'Malley, J. & Chamot, A. (1990). *Learning strategies in second language acquisition*. Cambridge, England: Cambridge University Press.
- Oppenheim, A. N. (1992). *Questionnaire design, interviewing and attitude measurement* (new ed.). London: Pinter.
- Oxford, R. (1993). Research update on teaching L2 listening. *System* 21, 205-211.
- Oxford, R. & Nyikos, M. (1989). Variables affecting choice of language learning strategies by university students. *Modern Language Journal*, 73, 291-300.
- Paris, S. G. & Winograd, P. (1990). How metacognition can promote academic learning and instruction. In B. F. Jones & L. Idol (Eds.), *Dimensions of thinking and cognitive instruction*. Lawrence Erlbaum Associates.
- Patrick, H. & Middleton, M. J. (2002). Turning the kaleidoscope: What we see when self-regulated learning is viewed with a qualitative lens. *Educational Psychologist*, 37, 27-39.
- Perry, N. E. (2002). Using qualitative methods to enrich understandings of self-regulated learning. *Educational Psychologist*, 37(1), 1-3.

- Perry, N. E., Vandekamp, K. O., Mercer, L. K. & Nordby, C. J. (2002). Investigating student – teacher interactions that foster self-regulated learning. *Educational Psychologist*, 37, 15-25.
- Poupart, J. (1997). L'entretien de type qualitatif : considérations épistémologiques, théoriques et méthodologiques. In J. Poupart, J. P. Deslauriers, L. H. Groulx, A. Laperrière, R. Mayer & A. P. Pires (Eds.), *La recherche qualitative : Enjeux épistémologiques et méthodologiques* (pp. 173-209). Montréal : Gaëtan Morin.
- Purpura, J. (1997). An analysis of the relationships between test takers' cognitive and metacognitive strategy use and second language test performance. *Language Learning*, 47, 289-294.
- Purpura, J. (1998). Investigating the effects of strategy use and second language test performance with high- and low-ability test-takers: A structural equation modeling approach. *Language Testing*, 15, 333-379.
- Rivers, W. (2001). Autonomy at all costs: An ethnography of metacognitive self-assessment and self-management among experienced language learners. *The Modern Language Journal*, 85, 279-290.
- Robinson, P. (1995). Attention, memory and the “noticing hypothesis”. *Language Learning*, 45, 283-331.
- Robinson, P. (2001). *Cognition and second language instruction*. Cambridge: Cambridge University Press.
- Robinson, P. (2002). *Individual differences and instructed language learning*. Amsterdam: John Benjamins.
- Rost, M. (2001). Listening. In R. Carter & D. Nunan (Eds.), *The Cambridge guide to teaching English to speakers of other languages* (pp. 7-13). Cambridge, UK: Cambridge University Press.
- Rost, M. (2002). *Teaching and researching listening*. London, U.K.: Longman.
- Rubin, J. (1994). A review of second language listening comprehension research. *The Modern Language Journal*, 78, 199-221.
- Russo, J. E., Johnson, E. J. & Stephens, D. L. (1989). The validity of verbal protocols. *Memory and cognition*, 17, 759-769.
- Samuda, V. (2001). Guiding relationships between form and meaning during task performance: The role of the teacher. In M. Bygate, P. Skehan & M. Swain (Eds.), *Researching pedagogic tasks: Second language learning, teaching and testing* (pp. 119-140). London, UK: Longman.
- Schmidt, R. (1990). The role of consciousness in second language learning. *Applied*

*Linguistics*, 11, 129-158.

- Schoonen, R., Hulstijn, J. & Bossers, B. (1998). Metacognitive and language-specific knowledge in native and foreign language reading comprehension: An empirical study among Dutch students in grades 6, 8 and 10. *Language Learning*, 48, 71-106.
- Schunk, D. H. (2001). Social cognitive theory and self-regulated learning. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement* (pp. 125-151). Erlbaum.
- Segalowitz, N. (1997). Individual differences in second language acquisition. In A. M. B. de Groot & J. F. Kroll (Eds.), *Tutorials in bilingualism: Psycholinguistic perspectives* (pp. 85-112). Mahwah, NJ: Erlbaum.
- Segalowitz, N. (2000). Automaticity and attentional skill in fluent performance. In Riggensbach, H. (Ed.), *Perspectives on Fluency* (pp. 200-219). Ann Arbor, MI: University of Michigan Press.
- Segalowitz, N. & Segalowitz, S. (1993). Skilled performance, practice, and the differentiation of speed-up from automatization effects: Evidence from second language word recognition. *Applied Psycholinguistics*, 14, 369-389.
- Shimamura, A. (2000). Toward a cognitive neuroscience of metacognition. *Consciousness and Cognition*, 9, 313-323.
- Someren, M. van, Barnard, Y. & Sandberg, J. (1994). *The think-aloud method: A practical guide to modeling cognitive processes*. London: Academic Press.
- Sparks, R. & Ganschow, L. (2001). Aptitude for learning a foreign language. *Annual Review of Applied Linguistics*, 21, 90-112.
- Tseng, W. -T., Dörnyei, Z. & Schmitt, N. (2006). A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition. *Applied Linguistics*, 27, 78-102.
- Tsui, A. B. M. & Fullilove, J. (1998). Bottom-up or top-down processing as a discriminator of L2 listening performance. *Applied Linguistics*, 19, 432-451.
- Ur, P. (1984). *Teaching listening comprehension*. Cambridge: Cambridge University Press.
- Ushioda, E. (1996). *Learner autonomy: The role of motivation*. Dublin: Authentik.
- Ushioda, E. (2000). Language learning at university: Exploring the role of motivational thinking. In Z. Dörnyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (pp. 93-125). Honolulu: University of Hawai'i Press.

- Ushioda, E. (2006). Motivation, autonomy and sociocultural theory. In P. Benson (Ed.), *Learner autonomy: Insider perspectives on autonomy in language teaching and learning* (pp. 5-24). Dublin: Authentik.
- Vandergrift, L. (1997). The strategies of second language (French) listeners: A descriptive study. *Foreign Language Annals*, 30, 387-409.
- Vandergrift, L. (2002). It was nice to see that our predictions were right: Developing metacognition in L2 listening comprehension. *Canadian Modern Language Review*, 58, 555-575.
- Vandergrift, L. (2003a). Orchestrating strategy use: Toward a model of the skilled second language listener. *Language Learning*, 53, 463-496.
- Vandergrift, L. (2003b). From prediction through reflection: Guiding students through the process of L2 listening. *Canadian Modern Language Review*, 59, 425-440.
- Vandergrift, L. (2004). Learning to listen or listening to learn? *Annual Review of Applied Linguistics*, 24, 3-25.
- Vandergrift, L. (2005). Relationships among motivation orientations, metacognitive awareness and proficiency in L2 listening. *Applied Linguistics*, 26, 70-89.
- Vandergrift, L., Goh, C. & Mareschal, C. (2005). Construction and validation of the Metacognitive Awareness Listening Questionnaire (MALQ). Paper presented at the July 2005 AAAL conference, Madison, Wisconsin.
- Vandergrift, L., Goh, C., Mareschal, C. & Tafaghodtari, M. (2006). The Metacognitive Awareness Listening Questionnaire: Development and validation. *Language Learning*, 56, 431-462.
- Veenman, M. V. J. & Spaans, M. A. (2005). Relation between intellectual and metacognitive skills: Age and task differences. *Learning and Individual Differences*, 15, 159-176.
- Vermersch, P. (1994). *L'entretien d'explicitation en formation initiale et en formation continue*. Paris: ESF.
- Victori, M. (1999). An analysis of writing knowledge in EFL composing: A case study of two effective and two less effective writers. *System*, 27, 537-409.
- Victori, M. & Lockhart, W. (1995). Enhancing metacognition in self-directed language learning. *System*, 23, 223-234.
- Watson-Gegeo, K. A. (1992). Thick explanation in the ethnographic study of child socialization and development: A longitudinal study of the problem of schooling for Kwara'ae (Solomon Islands) children. *New Directions for Child Development*, 58, 51-66.

- Weinstein, C. E. & Mayer, R. E. (1986). The teaching of learning strategies. In M. Wittrock (Ed.), *Handbook of research on teaching* (pp. 315-327). New York: Macmillan.
- Wenden, A. (1998). Metacognitive knowledge and language learning. *Applied Linguistics*, 19, 515-537.
- Wenden, A. (1999). An introduction to metacognitive knowledge and beliefs in language learning: beyond the basics. *System*, 27, 435-441.
- Wenden, A. (2002). Learner development in language learning. *Applied Linguistics*, 23, 32-55.
- Wesche, M. & Paribakht, T. S. (1996). Assessing second language vocabulary knowledge: Depth versus breadth. *The Canadian Modern Language Review*, 53, 13-40.
- Wesche, M. & Paribakht, T. S. (1999). *Introduction* (special issue on the centrality of lexical knowledge in second language acquisition). *Studies in Second Language Acquisition*, 21, 175-180.
- Wilson, M. (2003). Discovery listening - Improving perceptual processing. *ELT Journal*, 57, 335-343.
- Winne, P. (1995). Inherent details in self-regulated learning. *Educational Psychologist*, 30, 173-187.
- Winne, P. H. & Perry, N. E. (2000). Measuring self-regulated learning. In M. Boekaerts, P. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 531-566). Orlando, FL: Academic Press.
- Winne, P. (2001). Self-regulated learning viewed through models of information-processing. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement* (pp. 153-189). Mahwah, NJ: Erlbaum.
- Winne, P., Jamieson-Noel, D. & Muis, K. (2002). Methodological issues and advances in researching tactics, strategies, and self-regulated learning. In P. R. Pintrich & M. L. Moehr (Eds.), *New directions in measures and methods*, vol. 12 (pp. 121-155). Oxford: Elsevier Science Ltd.
- Wu, Y. (1998). What do tests of listening comprehension test? A retrospection study of EFL test-takers performing a multiple-choice task. *Language Testing*, 15, 21-44.
- Yang, N. D. (1999). The relationship between EFL learners' beliefs and learning strategy use. *System*, 27, 515-535.
- Zhang, D. & Goh, C. (2006). Strategy knowledge and perceived strategy use: Singaporean students' awareness of listening and speaking. *Language Awareness*, 15(3), 199-219.

- Zhao, Y. (1997). The effects of listeners' control of speech rate on second language comprehension. *Applied Linguistics*, 18, 49-68.
- Zimmerman, B. J. & Risemberg, R. (1997). Self-regulatory dimensions of academic learning and motivation. In G. D. Phye (Ed.), *Handbook of academic learning - Construction of knowledge* (pp. 105-125). Academic Press.
- Zimmerman, B. J. & Schunk, D. H. (2001). *Self-regulated learning and academic achievement*. Mahwah, NJ: Erlbaum.
- Zwaan, R. & Brown, C. (1996). The influence of language proficiency and comprehension skill on situation-model construction. *Discourse Processes*, 21, 289-327.

**APPENDICES**

**APPENDIX A** Transactional listening comprehension strategies

**PLANNING** involves developing an awareness of what needs to be done to successfully accomplish a listening task, and developing an appropriate action plan and/or appropriate contingency plans to overcome difficulties that may interfere with the successful completion of the listening task. Planning strategies include:

**Advance organization** which involves clarifying the objectives of an anticipated listening task and/or proposing strategies for handling it.

**Directed attention** which involves deciding in advance to attend in general to a listening task, and to ignore irrelevant distracters and to maintain attention while listening.

**Selective attention** which involves deciding in advance to attend to specific aspects of language input or situational details that may assist in understanding and in the listening task completion, and

**Self-management** which involves understanding the conditions that help one successfully accomplish listening tasks, and arranging for the presence of those conditions.

**MONITORING** involves verifying and, when warranted, identifying points needing resolution and correcting one's comprehension or performance in the course of a listening task.

**EVALUATION** involves verifying the outcomes of one's listening comprehension against an internal measure of completeness and accuracy, and when warranted, identifying the strengths and weaknesses in one's listening approach and the sources of one's comprehension difficulties.

**INFERCING** involves using information within the aural message to guess the meaning of ambiguous segments.

**ELABORATION** involves using knowledge from a source external to the aural message and relating it to knowledge gained from the text in order to predict outcomes or to deduce the meaning of ambiguous information.

**IMAGERY / VISUALIZATION** involves forming mental pictures to represent the information being heard.

**SUMMARIZATION** involves making a mental or written summary of language and information presented in an aural message.

**TRANSLATION** involves rendering ideas from one language to another in a relatively verbatim manner.

**TRANSFER** involves using knowledge of one language to facilitate listening in another.

(adapted from Mareschal, 2002, based on O'Malley & Chamot, 1990)

**APPENDIX B** Student listening note-book

Date :

Après la 1<sup>ère</sup> écoute:

J'ai compris :	Parce que :	Dans la 2 <sup>e</sup> écoute, je vais :

Après la 2<sup>e</sup> écoute:

J'ai compris :	Parce que :

Discussion de mon interprétation avec un partenaire

- 3<sup>ème</sup> écoute -

Discussion des interprétations en groupe

<b>Mes observations ou réflexions suite à cet exercice d'écoute :</b>
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**APPENDIX C Metacognitive Awareness Listening Questionnaire (51 item version)**  
(Vandergrift et al., 2005)

	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Slightly disagree</b>	<b>Partly agree</b>	<b>Agree</b>	<b>Strongly agree</b>
1. Before I start to listen, I have a plan in my head for how I am going to listen.	1	2	3	4	5	6
2. Before I listen, I think of similar texts that I may have listened to.	1	2	3	4	5	6
3. When doing a listening task in class, I use the comprehension questions to help me decide what to pay attention to.	1	2	3	4	5	6
4. I translate in my head as I listen.	1	2	3	4	5	6
5. I use the words I understand to guess the meaning of the words I don't understand.	1	2	3	4	5	6
6. As I listen, I focus on finding the information I need to know.	1	2	3	4	5	6
7. I use information such as sound effects and tone of the speakers' voices to help me guess the meaning of words I don't understand.	1	2	3	4	5	6
8. When I have trouble understanding, I keep on listening, because I expect to understand more later.	1	2	3	4	5	6
9. I have a goal in mind when I listen.	1	2	3	4	5	6
10. As I listen, I quickly adjust my interpretation if I realize it is not correct.	1	2	3	4	5	6
11. I try to guess what will come next, as I listen.	1	2	3	4	5	6
12. I correctly figure out the meaning of words I don't understand.	1	2	3	4	5	6
13. I try to get back on track when I lose concentration.	1	2	3	4	5	6
14. I focus harder on the text when I have trouble understanding.	1	2	3	4	5	6
15. I adjust my level of concentration depending on the speed of the text.	1	2	3	4	5	6
16. I take notes while listening, to help me understand.	1	2	3	4	5	6
17. I don't feel nervous when I listen to French.	1	2	3	4	5	6

	Strongly disagree	Disagree	Slightly disagree	Partly agree	Agree	Strongly agree
18. As I listen, I have a good idea when I do understand something and when I don't understand.	1	2	3	4	5	6
19. I use the general idea of the text to help me guess the meaning of the words I don't understand.	1	2	3	4	5	6
20. I summarize in my head important information I have understood, as I listen.	1	2	3	4	5	6
21. When I hear something I don't understand, I immediately decide whether I should spend time trying to understand it.	1	2	3	4	5	6
22. As I listen, I periodically ask myself if I am satisfied with my level of comprehension.	1	2	3	4	5	6
23. When I have difficulty understanding what I hear, I give up and stop listening.	1	2	3	4	5	6
24. I try to identify the key words, as I listen.	1	2	3	4	5	6
25. I imagine pictures of what I hear, as I listen.	1	2	3	4	5	6
26. When I guess the meaning of a word, I think back to everything else I've heard, to see if my guess makes sense.	1	2	3	4	5	6
27. I translate word by word, as I listen.	1	2	3	4	5	6
28. I think about the relationships between the speakers to help me understand.	1	2	3	4	5	6
29. When my mind wanders, I recover my concentration right away.	1	2	3	4	5	6
30. I use my experience and knowledge to help me understand.	1	2	3	4	5	6
31. As I listen, I repeat words to myself, to help me understand.	1	2	3	4	5	6
32. When I have trouble understanding, I tell myself that I'll manage and do fine.	1	2	3	4	5	6
33. As I listen, I compare what I understand with what I know about the topic.	1	2	3	4	5	6
34. I know exactly what to focus on as I listen.	1	2	3	4	5	6
35. When there are parts I didn't understand in a text, I think back to them at the end of the listening.	1	2	3	4	5	6
36. I concentrate more the second time I hear a text.	1	2	3	4	5	6

	Strongly disagree	Disagree	Slightly disagree	Partly agree	Agree	Strongly agree
37. When I have a chance to listen to a text a second time, I usually know where I need to pay more attention to understand it better.	1	2	3	4	5	6
38. After listening, I check my interpretation to confirm how much I have understood.	1	2	3	4	5	6
39. After listening, I think back to how I listened, and about what I might do differently next time.	1	2	3	4	5	6
40. I think that self-confidence plays an important role in listening comprehension in a second language.	1	2	3	4	5	6
41. I think that becoming an effective listener in a new language takes a lot of effort and patience.	1	2	3	4	5	6
42. I find it harder to stay motivated in French class, compared to the motivation I might have if I were studying a different subject.	1	2	3	4	5	6
43. I feel that listening comprehension in French is a challenge for me.	1	2	3	4	5	6
44. I find it harder to do well in French class, compared to the way I would likely perform if I were learning a different subject.	1	2	3	4	5	6
45. I find it harder to stay interested in French class, compared to the interest I might develop if I were studying a different subject.	1	2	3	4	5	6
46. I think I have what it takes to be an effective listener in the French language.	1	2	3	4	5	6
47. I find that listening in French is more difficult than reading, speaking, or writing in that language.	1	2	3	4	5	6
48. I find that I become more easily discouraged in French class, compared to the level of discouragement I might experience if I were studying a different subject.	1	2	3	4	5	6
49. I think that some individuals have a special ability for learning new languages.	1	2	3	4	5	6
50. I think that through effort and perseverance, anyone can learn a new language.	1	2	3	4	5	6
51. I think that I have what it takes to learn French well.	1	2	3	4	5	6

**APPENDIX D** Transcriptions of the aural texts utilized for the think-aloud tasks

Texts utilized for the beginning-of-study think-aloud task in the low-proficiency group

Transcription of excerpt 1 (1mn 50)

“... pour les nouvelles, dans quelques minutes, Francine Grimaldi... D’abord, vous êtes dans les tulipes, à Ottawa, toujours?”

“Toujours! Et bien, écoutez, j’écoutais Gilles, qui voyage en métro, Michel Coulombe, il voyage à bicyclette, vous le savez, et un fait à signaler à Michel Coulombe et à tous les mordus de la bicyclette : depuis ce matin, tous les dimanches matins, on ferme 65 kilomètres de rues, en plus des 170 kilomètres de pistes cyclables régulières, dans les villes de Gatineau (ex-Hull) et Ottawa. A Ottawa, c’est le Parkway : c’est, c’est fermé jusqu’à 13 heures. On peut se promener à pied ou à bicyclette ou en patins, enfin, c’est vraiment merveilleux, c’est, c’est charmant. Je pense que c’est un exemple que l’on pourrait peut-être suivre le dimanche à Montréal aussi.”

“Et bien oui!”

“Et bien, il y a, dans le cadre du festival canadien des tulipes, une série de concerts d’artistes Canadiens, tous les soirs, jusqu’au 24 mai, dans le parc derrière le Château Laurier où je suis, là. Heu, il y a..., hier, c’était les groupes Tangiers, Manpower, le groupe punk gagnant d’un Juno, Billy Talent, très attendu hier... Les jeunes, les jeunes s’installent dès le matin, hein, pour, toute la journée, attendre le show du soir. Et ce soir, aujourd’hui... ce matin, je n’ai pas regardé dans le parc, mais il y a Audrey de Montigny qui va chanter, à 21h30, ce soir, la star chérie de Canadian Idol...”

“D’accord.”

“... alors, je suis sûr qu’il y aura encore foule ce soir aussi. Et, à part ça, il y avait, à Ottawa, il y a, il y a de tout, hein, il n’y a quand même pas que des tulipes! Et heu... il y a Jean-Pierre Perreault, à qui on rend hommage...”

“Ha oui!”

“... jusqu’au 12 juin...”

“... le chorégraphe!”

“Oui, le chorégraphe, le regretté chorégraphe Jean-Pierre Perreault. On a repris Joe, hier soir, comme on l’avait fait à la place des Arts, sa magnifique chorégraphie, un chef-d’oeuvre. Mais à voir aussi, jusqu’au 12 juin : une exposition au Centre national des arts qui couvre toute la vie...”

“D’accord!”

“... et l’oeuvre de Perreault : des photos, des affiches, des maquettes, des esquisses, toutes sortes..... Vraiment, à voir...”

“Merci! Richard, au tennis...?”

(aural text recorded from a radio station broadcast by the LP group instructor)

Transcription of excerpt 2 (2mn 45)

La Fédération québécoise des échecs, l'Association échecs et maths et le Festival juste pour jouer vous invitent au championnat ouvert d'échecs du Québec, du 17 au 24 juillet, au Cégep du Vieux-Montréal, 255, Ontario Est, Montréal. Il y aura une soirée d'ouverture au Cégep du Vieux-Montréal samedi le 17 juillet, de 19h à 21h30. Ce sera une belle opportunité de rencontrer les grands maîtres invités, et de venir entendre et discuter des toutes dernières nouvelles du monde des échecs. Nous profiterons de l'occasion pour honorer les joueurs du Québec qui ont atteint de nouveaux sommets durant la dernière année. Le coût du billet est de 10 \$ (si payé à l'avance) ou de 20 dollars le 17 juillet à la porte (sandwiches et breuvages inclus). De plus, le grand maître Viktor Korchnoi participera au cup 2004. Korchnoi a eu une vie assez colorée. Il a fait défection de l'Union soviétique en 1976 et, par la suite, les Russes omettaient sciemment de mentionner son nom, même s'il gagnait un tournoi majeur. C'était comme s'il n'était plus de ce monde. Il a été impliqué dans un match de championnat du monde - avec Anatoli Karpov - qui a attiré l'attention des médias par ses nombreux rebondissements. Le match de championnat du monde de 1978, à Baguio, aux Philippines, mérite pleinement sa réputation de championnat du monde le plus bizarre à avoir été joué. L'équipe de Karpov comprenait le docteur Zukhar, un hypnotiseur bien connu, alors que Korchnoi prend dans son équipe un personnage louche qui subissait un procès pour meurtre. Il y eut également beaucoup de controverse à l'échiquier et des demandes assez farfelues : passer aux rayons X les chaises, protestations concernant les drapeaux utilisés et d'inévitables plaintes d'hypnotisme, accusant jusqu'aux lunettes de Korchnoi, qui utilisait des verres dont un côté était des miroirs. Mais quand l'équipe de Karpov lui a envoyé un yogourt aux bleuets pendant une partie sans qu'il en ait fait la demande, l'équipe de Korchnoi a vivement protesté, prétendant qu'il s'agissait certainement d'un message codé. Dans un jeu comme les échecs, où la jeunesse prime, Korchnoi, qui a eu 73 ans en mars, continue de jouer et de se maintenir au sommet. Comme le disait le maître Éric Beaulieu récemment, monsieur Korchnoi est un monument échiquéen sur la scène mondiale et il est un symbole de détermination et de conservation des fonctions cognitives. Cette année, les organisateurs ont mis le paquet afin que, plus que jamais, cette fête échiquéenne soit un grand succès. On ne ménage pas nos efforts afin que les joueurs d'échecs du Québec soient fiers de leur grande rencontre nationale.

(originally written text adapted and read aloud by the LP group instructor)

Text utilized for the beginning-of-study think-aloud task in the high-proficiency group  
(approx. 3 minutes)

“Monsieur, pouvez-vous essayer de me décrire la journée d'une de vos clientes? J'arrive et je gare ma voiture?”

“Ha, non! C'est dépassé, tout ça! Vous arrivez à l'entrée du parking et vous descendez de votre voiture. Là, on vous donne une carte perforée qui vous servira d'identification dans notre magasin. Votre voiture est garée automatiquement grâce à un convoyeur électronique et elle vous est rendue de même au moment de votre départ.”

“Merveilleux! Alors, ensuite, j'arrive dans le magasin et je prends un chariot à provisions, j'imagine.”

“Heu, oui, mais alors, là, une surprise.”

“Ah?!”

“Nous avons abandonné ces vieux chariots qui grincent et qui ne veulent jamais aller dans la direction que l'on veut. Les nôtres sont faits sur le principe du hovercraft : ils se déplacent sur un coussin d'air et changent de direction sur la simple pression d'un bouton. Donc, nos clientes n'ont aucun effort à faire.”

“Oh! Qu'est-ce qu'on ne fait pas avec la technique moderne! Mais, je suppose qu'on se promène dans les rayons et qu'on prend ce qu'on veut.”

“Heu, oui et non. Il y a deux formules. La formule A, pour les gens pressés : vous mettez votre carte dans une machine, puis vous appuyez sur les boutons correspondant aux marques des produits désirés. Ceux-ci arrivent alors automatiquement dans votre chariot par l'intermédiaire d'un tapis roulant.”

“Et la formule B?”

“La formule B est pour les gens qui ne sont pas pressés. Ceux-ci peuvent parcourir les rayons, mais il y a une innovation : vous n'avez pas à prendre les produits vous-mêmes. Vous appuyez sur un bouton et un éjecteur automatique dépose doucement la marchandise désirée dans votre chariot. Là encore, encore effort.”

“C'est en effet une façon reposante de faire ses achats!”

“Mais, nous avons tout prévu! Chaque rayon repose sur un système hydraulique. A chaque fois que vous retirez une unité du rayon, le poids varie. Chaque variation de poids est enregistrée par notre calculatrice électronique. Nous avons donc ainsi, pour chaque rayon et pour chaque produit, un état automatique du stock. D'autre part, nous pouvons vérifier immédiatement si le chiffre d'affaire réalisé dans la journée correspond bien à la baisse enregistrée dans le stock.”

“Justement, passons au paiement. Comment avez-vous résolu le problème?”

“Mais, c'est très simple. Toutes nos marchandises ont une empreinte magnétique qui varie selon le prix. Quand vous passez à la caisse, vous présentez votre chariot à un lecteur électronique qui, en une seconde, totalise votre addition, sans risque d'erreur. Vous déposez alors l'argent dans un emplacement spécial. Soit la somme est exacte et une barrière s'ouvre, soit la machine vous rend la monnaie et vous libère.”

“Et si l'on paie par chèque?”

“Notre machine possède un analyseur de chèques qui est en relation permanente

avec tous les ordinateurs des banques françaises. Il nous est ainsi possible de savoir immédiatement si le chèque est approvisionné ou non. Si le chèque est sans provisions, la machine alerte aussitôt l'un des cinquante inspecteurs qui patrouillent dans le magasin. Celui-ci vous conduit alors au tribunal le plus proche, pour recevoir un jugement rapide."

"Et bien, dîtes donc, vous pensez à tout!"

"Oh! Ce n'est pas nous, mademoiselle, c'est la société américaine qui contrôle notre magasin qui a pu, grâce aux études les plus récentes, réaliser ce chef-d'oeuvre de la technique et de la civilisation modernes."

"Mais, comment votre machine peut-elle savoir si l'on met des vrais billets dans la caisse?"

"Notre machine possède un analyseur de billets de banque unique au monde. Si un faux billet est présenté à nos caisses, une cage de fer sort du sol et entoure immédiatement le coupable, en attendant l'arrivée de la police."

"Ha! Vous ne laissez vraiment rien au hasard!"

"Nous ne pouvons pas, mademoiselle. Nos marges bénéficiaires sont trop réduites! Quand nous aurons éliminé nos concurrents et que nous pourrons pratiquer les prix que nous voulons, alors, peut-être, les choses changeront."

"Mais, si je comprends bien, vous n'avez pas de personnel dans le magasin?"

"Heu, non, mademoiselle. Nous faisons entièrement confiance à la machine. Le personnel n'a pas une efficacité de cent pour cent et il se met en grève. La machine, jamais!"

"Oui, et bien, moi, voyez-vous, je préfère quand même mon petit épicier du coin. Au revoir, monsieur, et je vous souhaite de ne pas avoir trop de pannes d'électricité!"

(aural text entitled *un magasin révolutionnaire*, selected by the HP group instructor, from the pedagogical series *Vient de paraître*, The British Broadcasting Corporation and the contributors, 1971. 1975 – EMC corporation – Interviews 17 - 20)

Text utilized for the end-of-study think-aloud task in the low-proficiency group  
(approx. 3 mn 30 s.)

« Ici, Robert Desbiens. Depuis 11 heures quatorze ce matin, vous êtes menacés par le printemps. Vous pouvez enfin réaliser vos rêves, tout bouculer dans votre vie et même tomber amoureux ou amoureuse. Nous vous demandons, ce soir, si vous subissez la fièvre du printemps. Bonsoir, mesdames, messieurs ! Bonsoir, Louise Arcan ! ».

« Bonsoir, Robert Desbiens ! Chers auditeurs, pour répondre à notre question, nous vous invitons à nous téléphoner dès maintenant en composant le 285-3728 si vous appelez de la région montréalaise. Si vous appelez de l'extérieur, vous faites 0 - 514 - 285-3728 et vous faites virer les frais. Robert Desbiens ? ».

« Et bien, voilà, c'est fait, la première des quatre saisons est arrivée. C'est celle, si l'on veut, du devenir. C'est la saison de la préparation, de l'espoir, des projets et beaucoup aussi de la folie. Ce pourrait même être la saison des coups de foudre... foudroyants. Le printemps, c'est, contrairement à l'été, qui est la saison de la possession, celle du désir ; c'est la saison de l'adolescence, plutôt que celle de l'âge mûr. L'été, disait Victor Hugo, c'est la saison des nids, et le printemps, c'est la saison des amours. Il y a, dans le printemps, quelque chose de magique et aussi de très perceptible en chacun de nous ; et il arrive même, parfois, qu'un printemps transforme une vie. Mais, pour être sensible au printemps, il y faut bien sûr de la connivence et aussi entrer dans le jeu. C'est difficile d'y échapper, au printemps, en tout cas pour les peuples du Nord, c'est plus évident : nous assistons à l'allongement graduel des jours, aussi au réchauffement de la terre, à l'animation des villes, par exemple : l'ouverture des bistros, les flirts qui se multiplient... En fait, notre météo du coeur s'en trouve souvent agréablement bouleversée. Et c'est vraiment ce que l'on appelle la fièvre du printemps, et cet état d'âme n'est pas imaginaire. Des scientifiques ont en effet découvert que le cerveau mesure la longueur des jours, et qu'en hiver, quand les jours sont plus courts, une des glandes du cerveau, la glande pinéale, produirait une substance appelée mélatonine et qui serait responsable des dépressions. A mesure que le printemps approche et que les jours rallongent, la glande pinéale produirait plus de mélatonine et donc redonnerait le goût de vivre. Alors, voilà ce qu'on pourrait ou ce qui pourrait expliquer le fait que vous vous soyez sentis tout dernièrement, même aujourd'hui peut-être, frivoles et même légèrement, même légers plutôt, un peu fous et heureux tout à la fois, et cela, sans raison particulière.

Alors, le printemps est arrivé, nous vous demandons, ce soir, si vous en subissez les effets, si vous croyez à la fièvre du printemps, si vous rêvez d'y succomber, si vous avez le goût de vous laisser séduire par elle. Bien sûr, il y a mille façons d'être séduit : faire des projets, préparer ses vacances, acheter des graines de semence, tomber amoureux sans réfléchir, ce qui constitue un pléonasme ou alors respirer

simplement le parfum de la neige qui fond sur les gazons ou sur le macadam qui se réchauffe.

Alors, nous vous demandons, ce soir, si vous subissez la fièvre du printemps ou si vous avez le goût d'y succomber ».

(original radio station broadcast, from the Radio-Canada audio-tape series *Présent à l'écoute*)

Text utilized for the end-of-study think-aloud task in the high-proficiency group  
(approx. 2 mn)

Le romancier qui transforme la réalité constante, brutale et déplaisante, pour en tirer une aventure exceptionnelle et séduisante, doit, sans souci exagéré de la vraisemblance, manipuler les événements à son gré, les préparer et les arranger pour plaire au lecteur, l'émouvoir ou l'attendrir. Le plan de son roman n'est qu'une série de combinaisons ingénieuses conduisant avec adresse au dénouement. Les incidents sont disposés et gradués vers le point culminant et l'effet de la fin, qui est un événement capital et décisif, satisfaisant toutes les curiosités éveillées au début, mettant une barrière à l'intérêt, et terminant si complètement l'histoire racontée qu'on ne désire plus savoir ce que deviendront, le lendemain, les personnages les plus attachants.

Le romancier, au contraire, qui prétend nous donner une image exacte de la vie, doit éviter avec soin tout enchaînement d'événements qui paraîtrait exceptionnel. Son but n'est point de nous raconter une histoire, de nous amuser et de nous attendrir, mais de nous forcer à penser, à comprendre le sens profond et caché des événements. A force d'avoir vu et médité, il regarde l'univers, les choses, les faits et les hommes d'une certaine façon qui lui est propre et qui résulte de l'ensemble de ses observations réfléchies. C'est cette vision personnelle du monde qu'il cherche à nous communiquer en la reproduisant dans un livre. Pour nous émouvoir, comme il l'a été lui-même par le spectacle de la vie, il doit la reproduire devant nos yeux avec une scrupuleuse ressemblance. Il devra donc composer son oeuvre d'une manière si adroite, si dissimulée, et d'apparence si simple, qu'il soit impossible d'en apercevoir et d'en indiquer le plan, de découvrir ses intentions.

(originally written text – préface de *Pierre et Jean* – from Guy de Maupassant, selected and read aloud by the HP group instructor)

**APPENDIX E** Guiding questions for the beginning-of-study semi-structured interviews

Could you tell me a little bit about yourself, such as what your position within the federal government is, which ministry you are affiliated with, and what your general educational background is (i.e. studies principally in : sciences, English writing...)?

Can you tell me why you are presently taking French language training ?

Had you studied French before (in school or university... / when... / how extensively)?

Thus far, has your French language training corresponded to your original expectations ?

Which aspects of the French language have you found easier to learn?  
Which aspects of the French language have you found more difficult to learn?

In particular :

reading vs. writing vs. speaking vs. listening comprehension

Has your progress been as you originally expected it to be ?  
Which factors do you perceive as having influenced your rate of progress ?

What do you think could facilitate your language training?  
Is there anything that you think that you – for your part – can do, to facilitate your language training ?

How do you presently foresee your future rate of progress in learning French? Could you explain upon which factors your assessment is based?

**APPENDIX F** Guiding question for the end-of-study semi-structured interviews

In this brief final interview, I simply wondered if you could share with me your general impressions about the listening training which you participated in over the course of the last few weeks, and any suggestions you may have for improvements to this listening training method.

**APPENDIX G Student end-of-study summative report**

## Listening training summative report

The purpose of this summative report on the listening training which you have received in the past few weeks is to provide you with the opportunity to share your personal insights, evaluations and suggestions concerning this training.

Whenever possible, please provide detailed answers to the following questions, as the level of precision in the answers which you will provide in this document could potentially be of great assistance to second language researchers, instructors, and students.

Thank you.

1. To what extent have the listening exercises enabled you to become more aware of the diversity of factors which influence listening comprehension in French?
2. If applicable, could you cite factors whose importance you have come to re-evaluate, in the course of the listening training?
3. Which specific factors do you consider exert a particularly strong influence on your listening comprehension in French?
4. To what extent did the listening training enable you to gain control over those factors which you consider exert a particularly strong influence on your listening comprehension in French? Please explain.
5. To what extent have the listening exercises enabled you to more comprehensively or more accurately assess your strengths and needs in French listening comprehension?
6. If applicable, could you explain which of your personal strengths or needs you have come to reassess in the course of the listening training?
7. Over the course of the listening training, would you say that your confidence in your abilities for French listening comprehension decreased, remained relatively similar, or increased? Please justify your answer.

8. Generally speaking, over the course of the listening training, would you say that the relative difficulty presented for you by listening comprehension in French decreased, remained relatively similar, or increased?

Once again, please justify your answer if possible.

9. Over the course of the listening training, would you say that your interest for listening in French decreased, remained relatively similar, or increased?

Please explain.

10. To what extent do you consider that the listening exercises have enabled you to make progress in your comprehension of spoken French?

Please justify your answer.

11. Please describe the strategies or tactics which, in your personal experience, proved most important to your successful understanding of the aural excerpts which you listened to these past few weeks.

Are there specific strategies or tactics which you are now using more frequently than you did before the listening training?

Are there specific strategies or tactics which – conversely – you are now using less frequently than you did before the listening training?

11. (continued)

Are there specific strategies or tactics which, in your experience, could frequently prove detrimental to your comprehension of spoken French?

Are there specific strategies or tactics which – conversely - could frequently prove beneficial to your comprehension of spoken French?

12. Did the twice-weekly schedule of listening training appear to you: excessive, adequate, or insufficient?

13. The method of listening comprehension development which you experienced in the past few weeks rested upon learner autonomy and self-discovery.

Do you consider that this approach was appropriate and that it enabled you to adequately fulfill your needs, or would you have preferred instead

more specific and more explicit pedagogical intervention in the listening comprehension training? Please explain.

14. In the listening training, you were given the opportunity to listen to the aural excerpts three times.

Based upon your personal experience, how would you rate the usefulness of listening to an aural passage a second time?

15. Based similarly upon your personal experience, how would you rate the usefulness of listening to an aural passage a third time?

16. The purpose of the listening “journals” was two-fold: to document your listening comprehension for research purposes, and to provide you with the opportunity to record your interpretations and thought processes in writing, in the event that this could facilitate your comprehension.

Based upon your personal experience, how would you rate the usefulness of note-taking in French listening comprehension training?

17. The listening training provided students with the opportunity to discuss their interpretations of an aural excerpt with a partner after the second listen.

Based, once again, upon your personal experience, how would you rate the usefulness of discussing your interpretation with a partner before the final listen to an aural text in French?

18. The listening exercises were frequently accompanied by various opportunities for oral expression, reading aloud, vocabulary and grammar analysis, etc.

Based upon your personal experience, how would you rate the usefulness of accompanying a listening exercise with complementary, related activities?

19. Among the activities which were conducted complementarily to the listening exercises, are there some which you found particularly useful for your specific needs?

20. Which complementary activities did you – conversely – find least useful to you?

21. Are there other, different complementary activities which you would have liked to have seen incorporated into the listening exercises?

22. Do you consider that receiving further listening comprehension training would be useful to you in the remainder of your French language training?
23. The level of achievement attained in listening comprehension in a second language - as in any complex cognitive task - can be the result of a multiplicity of factors.

Are there factors other than the listening training which you consider may have contributed to the outcomes of the listening training as you have previously described them here? Please explain in detail if possible.

Please feel free to add any other observation or suggestion you may like to express concerning the listening training or this research project.

Thank you.

**Note:** In the original, half a page was provided for answering each of the 23 questions

**APPENDIX H** Instructor end-of-study summative report

## Sondage à l'intention des enseignants participants

Je vous serais très reconnaissante de me faire part ici de vos observations, avis et recommandations concernant la méthode expérimentale de développement des aptitudes de compréhension auditive en langue seconde utilisée auprès de vos étudiants ces dernières semaines.

Avec, d'avance, tous mes remerciements,

Catherine Mareschal

Nom :

Date :

La méthode expérimentale utilisée auprès de vos étudiants ces dernières semaines visait trois objectifs fondamentaux interdépendants : (a) développer ou renforcer l'autonomie d'apprentissage à l'écoute en langue seconde, (b) permettre à l'apprenant d'enrichir ses connaissances des facteurs qui influencent la compréhension auditive en langue seconde, y compris dans son cas particulier, et (c) par le biais des deux objectifs nommés précédemment, amener progressivement l'apprenant à améliorer ses aptitudes à l'écoute, en particulier, par un emploi plus approprié des stratégies et un plus grand contrôle des facteurs affectifs influençant la compréhension auditive en langue seconde.

1. Dans quelle mesure considérez-vous que cette méthode expérimentale a permis de développer ou de renforcer l'autonomie d'apprentissage de vos étudiants à l'écoute en langue seconde?
  
2. Dans quelle mesure considérez-vous que cette méthode expérimentale a permis à vos étudiants d'enrichir leurs connaissances des facteurs qui influencent la compréhension auditive en langue seconde, y compris dans chacun de leurs cas particuliers?
  
3. Dans quelle mesure considérez-vous que cette méthode expérimentale a permis à vos étudiants d'améliorer leurs aptitudes à l'écoute?
  
4. Envisagez-vous de réutiliser la méthode de développement de la compréhension auditive que vous avez utilisée dans le cadre de cette étude de recherche auprès de vos prochains groupes d'apprenants de français langue seconde?

Merci de me faire part ici de toute observation, de tout commentaire et de toute

recommandation supplémentaires que vous jugez pertinents pour les analyses ou l'interprétation des résultats de cette étude ou bien qui permettraient à votre avis d'améliorer la méthode de développement de l'écoute utilisée auprès de vos étudiants ces dernières semaines ou de toute autre remarque que vous aimeriez exprimer.

**Note:** In the original, a full page was provided for answering each of the questions

**APPENDIX I** Ethics certification and participant consent forms



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Faculty of Education

My participation in a second 30 to 45 minute semi-structured individual interview, at the very end of the study, will consist in sharing my thoughts and suggestions with the researcher concerning the overall effectiveness of the pedagogical approach to L2 listening skills development investigated in this study. I understand that these semi-structured interviews will be audio-recorded.

My participation in the questionnaire administration will consist of completing a survey documenting my listening comprehension strategy use, as well as my motivation and interest for language learning. My completion of this questionnaire (requiring approximately 15 minutes) will be immediately followed by a 10 to 15 minute reflective interview ("stimulated recall interview"). The stimulated recall interview will be audio-recorded. In this interview,

I will review the answers I provided in the survey, and further explain the reasons for my answers to the researcher. The questionnaire administration accompanied by a stimulated recall interview will take place three times: at the beginning, in the middle, and at the end of the study.

My participation in the think-aloud sessions will consist of participating in two recording sessions of 30 to 45 minutes where I will be asked to "think-aloud" as I listen to two short texts in French. The think-alouds will be immediately followed by a 10 to 15 minute reflective interview ("stimulated recall interview") where I shall listen to the recording of my think-aloud, and attempt to further explicate any incomplete segment, or any segment which may be ambiguous to the researcher. The think-aloud sessions accompanied by a stimulated recall interview will take place at the beginning and at the end of the study.

I understand that I shall be able to conduct all reporting in English. I understand that no special knowledge or skills are required of me in order for me to participate. My participation is voluntary. I may withdraw before or during the first interview or refuse to answer questions at any time without any adverse consequences. My acceptance or refusal to participate in this phase of the project will in no way affect the evaluation I will receive in my language training.

The sessions will be scheduled at a time convenient to me outside of regular class time.

I understand that my think-aloud reflections will be used only for the purposes of this study. If the researcher should use any of my questionnaire, think-aloud, or interview comments, my anonymity will be strictly protected by use of a pseudonym, and any element in my reports which could permit my identification will be excluded from publication.

145, rue Jean-Jacques-Lussier C.P. 450, Succ. A  
Ottawa (Ontario) K1N 6N5 Canada

145 Jean-Jacques Lussier St., P.O. Box 450, Stn. A  
Ottawa, Ontario K1N 6N5 Canada



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I have also received assurance from the researcher that all written data and recordings of my reports will be securely stored in her home, and will be destroyed by September 2004, at which time all coded data is expected to have been electronically stored. All electronically stored data will be securely kept in my supervisor's office at the University of Ottawa.

Any information about my rights as a research participant may be addressed to:

Protocol Officer for Ethics in Research  
550 Cumberland Street, Room 160  
(613)562-5387 or [ethics@uottawa.ca](mailto:ethics@uottawa.ca).

There are two copies of this consent form, one of which I may keep. If I have any questions about the conduct of this research project, I may contact the researcher or her supervisor at the addresses provided above.

Researcher's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Research Participant's signature: \_\_\_\_\_ Date: \_\_\_\_\_

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There are two copies of this consent form, one of which I may keep. If I have any questions about the conduct of this research project, I may contact the researcher or her supervisor at the addresses provided above.

Researcher's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Research Participant's signature: \_\_\_\_\_ Date: \_\_\_\_\_

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J'ai reçu l'assurance du chercheur que toutes les données recueillies auprès de mes étudiant(e)s seront conservées en lieu sûr à son domicile, et que ces données seront détruites d'ici septembre 2004, date à laquelle le chercheur prévoit avoir fait l'enregistrement électronique de toutes les données recueillies. Les données électroniques seront conservées en lieu sûr au bureau de son directeur de thèse à l'Université d'Ottawa.

Pour tout renseignement concernant mes droits à titre de participant(e) à ce projet de recherche, je peux m'adresser au : Responsable des comités d'éthique, salle 160, 550 rue Cumberland, ou bien contacter cette personne au (613) 562-5387, ou encore, à l'adresse électronique : [ethics@uottawa.ca](mailto:ethics@uottawa.ca). Il y a deux exemplaires de ce formulaire de consentement, dont l'un m'est destiné. Pour toute question concernant l'exécution de ce projet de recherche, je peux contacter le chercheur ou son directeur de thèse aux coordonnées fournies ci-dessus.

Signature de l'enseignant(e) : \_\_\_\_\_ Date: \_\_\_\_\_

Signature du chercheur : \_\_\_\_\_ Date: \_\_\_\_\_

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