Preface

This volume includes two closely related parts: the first, a comprehensive review of research on the topic of lexical inferencing, and the second, presentation of a trilingual study of first language (L1) influences in second language (L2) lexical inferencing and other cross-linguistic dimensions of L1 and L2 lexical inferencing by Persian, French and English speakers. The trilingual study evolved from our previous studies of L2 lexical acquisition starting in the early 1990s and carried out within the larger context of an increasing research focus by applied linguists and language educators on lexical issues. Our mutual professional context at the University of Ottawa's Official Languages and Bilingualism Institute (formerly the Second Language Institute) and Education Graduate Studies involved participation in academic English L2 instruction and test development alongside graduate teaching and research.

The research journey we undertook together began with issues of lexical development through L2 reading and reading-related vocabulary instruction, leading over time to a primary focus on lexical inferencing. It built on our respective life experiences as language learners in varied contexts and as applied linguists and language educators; thus, in addition to theoretical considerations, language learners' perspectives and considerations of appropriate contexts and methodologies for language teaching were important in the conceptualization and interpretation of our studies of L2 vocabulary learning through reading. Paribakht brought to this work a research background in L2 communication strategies and comprehension-based language learning and instruction, while Wesche's previous research had centered on the nature of the language addressed to learners, L2 learning through content-based instruction in school immersion and post-secondary programs, and language testing.

A shared research journey

Our early joint studies evolved from issues facing the University in terms of its L2 instructional programs for Canadian and international student populations, and all of them have been at least partially grounded

in the French/English context of the bilingual national capital region of Ottawa, Canada. Important to all our work has been frequent contact with North American and international colleagues involved in related issues, in person and through correspondence, particularly in the early years when both applied linguists and language educators were beginning to deal more comprehensively with L2 lexical issues after a long period in which vocabulary acquisition research had tended to be separate from lexical research in language education. Annual AAAL conferences and triennial World Congresses of Applied Linguistics (AILA) provided stimulating venues for the critical exchange of ideas and information in this area.

In 1996, at the 11th AILA Congress in Jyväskylä, Finland, we reported on our work in two symposia that – together with other Congress activities – recognized the increasing importance of lexical issues in second language acquisition (SLA) after a long period of relative neglect and the need to share research perspectives on vocabulary research across the fields of SLA and language education. One symposium, co-organized by Kirsten Haastrup and Åke Viberg (Haastrup & Viberg, 1998), offered multiple perspectives on lexical acquisition, including that of lexical input processing (Wesche & Paribakht, 1998). This led to our ongoing exchange of ideas with Kirsten on topics of common interest that culminated in her collaboration with us on the comprehensive review of lexical inferencing research that comprises Part 1 of this book. We, ourselves, co-organized the other symposium, on 'incidental' vocabulary acquisition (i.e. gains in vocabulary knowledge that occur as a 'by-product' when L2 readers are focused on comprehending text meaning rather than on the goal of learning new words). Several of its participants underscored the importance of lexical inferencing in reading comprehension and its frequent role as an initial stage in lexical acquisition. Papers from this symposium were published, with others, in a special issue of *Studies in Second Language Acquisition* on the same topic (Paribakht & Wesche, 1999; Wesche & Paribakht, 1999a, 1999b). This Congress and the resulting interactions with other researchers provided a vital stimulus to our work on L2 lexical issues.

The following brief account of the consecutive studies that led to the trilingual study of Persian, French and English speakers presented in Part 2 of this volume serves to contextualize this research, and may be of particular interest to readers not familiar with our previous work. The individual studies are outlined below.

Study I: Vocabulary learning in a comprehension-based L2 course

The first study (Paribakht & Wesche, 1993) responded to changes in a long-standing L2 graduation requirement at the University of Ottawa, an institution with a mandate to promote students' knowledge of both official languages of Canada. Undergraduate students enrolled in the faculties of Arts and Social Sciences were required to attain functional listening and reading proficiency in their second 'official' language, adequate for them to read textbooks or comprehend lectures in their respective fields. In reality, this L2 requirement in English or French represented a third (or later) language for many international students, whose study language was itself an L2. Due to difficulties in equitably enforcing this high-level, functional L2 proficiency requisite for graduation through formal testing, particularly with the University's increasing enrolment of international students, the requirement was modified to allow students the alternative of completing a series of four one-semester L2 courses that emphasized receptive skills (listening and reading comprehension). The Institute was mandated to develop and deliver these 'comprehension-based' courses in both English and French. The resulting teaching approach emphasized development of students' ability to comprehend challenging thematic content presented through authentic oral and written texts, with only a minimal focus on grammar and language production.

As faculty members involved in the design and delivery of these comprehension-based courses, we undertook evaluation of the reading-related learning outcomes of the advanced English as a second language (ESL) comprehension courses and an exploration of the role of comprehension in L2 development. In the 1993 study, we examined students' proficiency gains in receptive vocabulary and grammar over a period of one semester in the fourth-level ESL comprehension course, as compared with gains by students in a four-skills course at the same level, involving explicit grammatical instruction and both oral and written production. The vocabulary study evaluated and compared gains in target word knowledge by the two groups in terms of the word types (nouns or verbs versus discourse connectors) that were more readily acquired by each group, and explored whether different stages of word learning could be identified and measured. The comprehension-based group showed superior gains in vocabulary knowledge for all the word types studied, whereas the comparison group made greater gains in grammatical knowledge.

A major by-product of this research was an instrument that could capture certain initial stages in learning previously unknown L2 words. This instrument, the *Vocabulary Knowledge Scale* (VKS), has been useful in our subsequent studies of word learning through reading, including the present research (see Chapter 4; Paribakht & Wesche, 1996, 1997; Wesche & Paribakht, 1996), as well as to other researchers, including in an adapted form for oral language (e.g. Joe, 1995).

We developed the VKS for the purpose of documenting evidence of learners' knowledge of selected L2 words, to allow tracking and comparison of their knowledge gains in different contexts involving written texts. It uses both a self-report Elicitation Scale and confirmation tasks evaluated on a separate Scoring Scale to identify five kinds of target word knowledge that are widely considered to represent progressive stages in learning a given word. These range from recognition of the word form to the ability to use the word with both semantic and syntactic accuracy in a sentence. VKS scores offer a relatively efficient means of broadly characterizing a reader's knowledge of selected target words at a given point in time; they do not, however, provide detailed information on the process of learning individual words or a particular dimension of that process. Parallel and subsequent work for other purposes on the multiple dimensions of lexical development, 'depth' of vocabulary knowledge and the issues involved in determining developmental progressions has advanced understanding of what is needed for more precise theoretical characterizations of the word-learning process, but the development of measurement instruments for quantifying this remains a challenge (see, e.g. Haastrup & Henriksen, 1998; Henriksen, 1999, 2008).

Study II: Incidental versus instructed vocabulary learning

The findings of the first study incited us to further explore the nature of incidental vocabulary acquisition through reading in post-secondary educational contexts, given the relevance of this issue not only for theory, but also as a practical concern for learners studying through their L2. A follow-up comparative study (Paribakht & Wesche, 1997) investigated the vocabulary gains of a similar population of ESL students at the University of Ottawa under two experimental conditions: 'incidental' versus 'instructed' vocabulary acquisition. In the 'Reading Only' (incidental) condition, students read thematically related core and supplementary texts that together provided repeated exposure to unfamiliar target words, followed by a series of text-based comprehension questions. In

the 'Reading Plus' (instructed) condition, reading of core texts was combined with systematic exposure to the target words through a series of text-based vocabulary exercises. An equal amount of time was spent on the two treatments.

Learners gained vocabulary knowledge under both conditions, but the gains were superior in the Reading Plus condition, both quantitatively (i.e. the number of words learned) and qualitatively (i.e. how well they were learned, as operationalized by the VKS). This research demonstrated the slow and unpredictable, even if measurable, nature of incidental L2 vocabulary learning through reading, and that it often leads only to a recognition level knowledge of target word forms. It also showed that instructional intervention involving manipulation and practice of words first encountered through reading enhances vocabulary-learning outcomes. In the course of this research, we developed a 'taxonomy of text-based vocabulary exercises/task types' for designing different word-learning exercises for selected words in texts (Paribakht & Wesche, 1996). These types roughly correspond to Gass' (1988) SLA stages (here applied to lexical acquisition), which are each, in turn, seen as requiring a higher level of cognitive activity, i.e. apperceived input (noticing), comprehended input, intake, integration and output.

The next, closely related, research phase involved two introspective studies with similar groups of intermediate ESL readers to further explore the processes underlying the differential vocabulary learning outcomes of the Reading Only and Reading Plus experimental conditions.

Study III: Reading Only

In the Reading Only introspective study (Paribakht & Wesche, 1999), the goal was to better understand how learners deal with unfamiliar words when reading and the strategies they use. Participants were required to read brief authentic texts and carry out two comprehension tasks. The first task required them to answer a series of text-related comprehension questions, while the second required them to orally summarize the main points in the text. Following each of the comprehension tasks, readers were asked to indicate any unfamiliar words they had encountered while reading the texts and doing the tasks, and how they had dealt with each of them.

Participants reported ignoring about half of the words they did not know, while for the other words, they used three strategies to find word meanings. Lexical inferencing was their main strategy, used 80% of the time, while in the other cases they either attempted word retrieval

(repeating the word to see if it sounded familiar or to arouse any associations) or they used a dictionary. Our further analysis of the kinds of textual information and knowledge these L2 readers used in lexical inferencing led to a conceptualization of such inferencing as a search process through which learners attempt to identify constituents of the missing lemma, such as its grammatical category or conceptual elements (see Chapter 1; de Bot *et al*., 1997).

Study IV: Reading Plus

The second introspective study, involving the Reading Plus instructional condition, sought insight into how text-based vocabulary tasks might contribute to learners' acquisition of vocabulary knowledge (Wesche & Paribakht, 2000). In addition, a separate task analysis, including both the instructionally intended and the learner derived goals and realizations of each comprehension task and the five exercise types in the two conditions, illuminated how given pedagogical activities may influence lexical processing. Differences were found between the two comprehension tasks as well as for each Reading Plus exercise. Additionally, divergence was found for at least some learners in each case between the instructional intention behind the task and what they actually did (Wesche & Paribakht, 1998). The comparative findings for the two treatments nonetheless confirmed notable overall differences between the comprehension task realizations in the Reading Only treatment and the more varied cumulative processing that occurred with the Reading Plus exercises. The latter together promoted both greater knowledge elaboration and practice of the target words. Participants furthermore reported greater confidence in their knowledge of the target words following the exercises. We interpreted these outcomes as an indication that the exercises had increased the salience of the target words and focused learners' attention on different aspects of word knowledge (e.g. formal, semantic and grammatical properties, relationships with other words). The exercises also provided opportunities for using the words in different contexts, thereby presumably requiring deeper levels of lexical processing. The findings helped explain the superior vocabulary learning outcomes of the Reading Plus condition and provided support for the claim that vocabulary learning is an incremental, iterative process, requiring multiple exposures to and use of given words in varied contexts.

Study V: Cross-linguistic study

Given the demonstrated importance of lexical inferencing in word and text comprehension, and its role as well as limitations in L2 vocabulary acquisition, we next embarked on the large-scale trilingual study reported in Chapters 3–6 of this book (also see Paribakht, 2005; Paribakht & Wesche, 2006; Paribakht & Tréville, 2007). This research has involved a much more comprehensive examination of the process and outcomes of lexical inferencing than the earlier studies. The rich data elicited from learners from three different L1 backgrounds inferring meanings for unfamiliar words in L1 and L2 texts have permitted a detailed examination of the complex cognitive strategy of lexical inferencing. They have also illuminated several factors that affect the process and its outcomes; most prominently, the influence of readers' L1 knowledge, their very high lexical proficiency in their L1 versus lesser lexical proficiency in their L2, and the typological distance between the L1 and the L2. The findings of the several sub-studies in this project have helped us to better understand not only lexical inferencing, but also the related processes of reading comprehension and initial vocabulary acquisition through reading. In addition, they have brought to light some of the specific problems that L2 readers from different L1 backgrounds encounter, and offer implications for reading and vocabulary instruction at advanced levels.

Organization of the book

Part 1 of this book, co-authored by Kirsten Haastrup, consists of two chapters that together provide an overview of the topics and introduce the empirical study reported in Part 2. The first chapter reviews lexical inferencing research since the early 1970s, synthesizing what is known about this complex cognitive phenomenon, its role in reading comprehension and vocabulary acquisition, factors that influence the inferencing process and its outcomes, and theoretical characterizations of it. Chapter 2 presents previous research findings relevant to the issues of L1 transfer in L2 lexical inferencing, including relative typological distance between L1 and L2, as background to the trilingual study reported in the remaining chapters.

Part 2 of the book reports on the trilingual study of L1 and L2 lexical inferencing outlined above under Study IV. Chapter 3 presents the conceptualization and methodology of the study. Chapter 4 reports on readers' use of different knowledge sources as these relate to their native languages and to L1 versus L2 conditions, and as they reveal L1

transfer effects in L2 lexical inferencing. Chapter 5 deals with lexical inferencing success and retention of new knowledge as these vary for the different language groups and in L1 versus L2 conditions as well as with readers' previous L2 lexical knowledge. Tentative relationships are drawn between the lexical inferencing process and initial retention of new word knowledge. Chapter 6 synthesizes the study findings, drawing conclusions with respect to commonalities across all conditions, L1 versus L2 lexical inferencing; L1 transfer in L2 inferencing, particularly as influenced by L1/L2 typological distance; the importance of previous L2 lexical knowledge in inferencing success and word learning, and other factors explaining differences between outcomes for the Persian and French speakers in English. Finally, implications are drawn for further research and for L2 reading and vocabulary instruction.