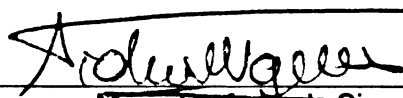This is to certify that the
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IN L2 FRENCH READING COMPREHENSION

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JULIE A. FOSS

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INDIVIDUAL DIFFERENCES AND TEXT GENRE
IN L2 FRENCH READING COMPREHENSION

By

Julie A. Foss

A DISSERTATION

Submitted to
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ABSTRACT

INDIVIDUAL DIFFERENCES AND TEXT GENRE
IN L2 FRENCH READING COMPREHENSION

By

Julie A. Foss

Reading in another language (L2) is a complex, multidimensional process dependent upon both reader-based and text-based factors. The purpose of this study was to investigate the roles of reader-based individual difference variables and of the text-based variable of genre in reading comprehension in French. The sample included 153 adult learners enrolled in beginning, intermediate and advanced level university French courses.

Structural equation modeling results provided support for a model in which L1 reading ability and L2 proficiency positively influenced L2 reading (recall) comprehension, metacognitive knowledge positively influenced L1 reading ability and L2 proficiency, L2 contact positively influenced L2 proficiency, motivation positively influenced L2 proficiency, L2 contact and study habits (motivational intensity), and anxiety positively influenced study habits. This model accounted for 73% of variance in L2 reading comprehension.

A comparison of models for narrative and expository comprehension showed that L2 proficiency contributed significantly less to comprehension of the narrative genre than to the expository genre. Furthermore, recall comprehension scores for narrative texts were significantly higher than scores for expository texts. Factorial analysis of variance (ANOVA) showed a significant main effect of genre on comprehension, as well as a significant main effect for text. A significant interaction of genre and text with learner

level was also present. While differences in comprehension scores by genre were significant at all three levels of French study, genre effects were more robust among intermediate and advanced learners than among beginners, and different patterns of comprehension for each text existed between the advanced learners and the intermediate and beginning learners.

An additional aim of the study was to assess readers' affective reactions to reading each genre in the L2 and to reading the experimental passages. Factorial ANOVA showed significantly greater levels of enjoyment, greater comprehensibility and less anxiety for the narrative genre in general, as well as for the narrative experimental texts. Whereas no significant differences in perceptions of the utility of the narrative and expository genres in general existed, participants found the two expository experimental texts more useful to read than the narrative passages. Reactions to each genre and to the experimental texts varied significantly by learner level, with advanced learners reacting more positively to both genres as well as to the experimental texts than beginning and intermediate students. A significant interaction between all categories of affective reactions and text, however, revealed considerable variability in reactions to each of the four texts. Participant comments suggested that factors such as personal engagement with the topic, text organization, salience of details, and word and sentence-level features also affected their reading experience.

ACKNOWLEDGMENTS

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CHAPTER 1: INTRODUCTION

1.1 L2 reading

Reading is one of the most useful skills for foreign language[1] students, whose

opportunities to read in the target language (L2) are typically more plentiful than their

opportunities to interact with speakers of that language. Reading provides language

learners with input that facilitates the development of language proficiency and cultural

competence. In addition, reading in another language promotes lifelong language

learning, as L2 reading skills tend to be more stable and better retained than productive

skills like speaking and writing (Bernhardt, 1991). Yet L2 reading is an extraordinarily

complex process dependent upon an array of reader-based, text-based and contextual

factors that are far more varied than those implicated in native language (L1) reading. As

a result, as useful and important as they may be, L2 reading skills are not always easily

acquired.

Reading has long been characterized as an interactive process in which readers

use various types of knowledge and abilities to construct meaning from written input.

Reading in another language is a still more complicated process in that it draws on

knowledge and skills developed in both L1 and L2 experiences. In addition to depending

on knowledge of L2 language structures and vocabulary, success in reading in another

language is also determined in part by native language reading ability (Bernhardt, 2005;

Bernhardt & Kamil, 1995; Bossers, 1991; Brisbois; 1995, Carrell, 1991; Lee & Schallert,

1997). Metacognitive knowledge, or what readers know about reading, developed during

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[1] I use *foreign language study* to denote language study occurring outside of a community where
the target language is spoken (e.g., native English speakers learning French in the United States).
This is in contrast to *second language study,* which occurs in the target language environment
(e.g., native English speakers learning French in France).

both L1 and L2 experiences has also been shown to influence L2 reading (Gelderen, Schoonen, Glopper, Hulstijn, Simis, Snellings, & Stevenson, 2004; Schoonen, Hulstijn, & Bossers, 1998). Other experiential factors, such as the amount of contact with the target language (Ellis, 2002), particularly the amount of exposure to print (Constantino, Lee, Cho, & Krashen, 1997; Elley, 1991; Elley & Mangubhai, 1983; Kim & Krashen, 1997) may also predict reading L2 comprehension outcomes.

Readers in any language, however, bring more to the task than knowledge, ability and experience. L1 research (Baker & Wigfield, 1999; Gottfried, 1990; Guthrie, Wigfield, Metsala, & Cox, 1999) has provided evidence that motivational (those related to reasons for choosing to read or not to read) and affective (those related to emotions) differences between readers may also affect reading outcomes. Empirical studies have found strong relationships between motivation, anxiety and various measures of L2 learning, and recent research suggests that these types of non-linguistic variables may also contribute to L2 reading (Argamon & Abu-Rabia, 2002; Brantmeier, 2005; Kondo-Brown; 2006; Mori, 2004; Sellers, 2000; Yamashita, 2004).

Reading also requires an interaction between these myriad reader-based factors and a particular text, whose structure and content affect how the reader's knowledge is deployed and how he or she reacts affectively to the text. L1 reading research has shown that text type, or genre, is an important text-based predictor of reading comprehension. Though L1 reading studies (Graesser, Hauft-Smith, Cohen, & Pyles, 1980; Kintsch & Young, 1984; Kozminsky, 1977; Petros, Norgaard, Olson, & Tabor, 1989; Tun, 1989; Zabrucky & Ratner, 1992) have provided ample evidence that narrative, or story-based, texts are easier to recall and understand than expository, or informational, texts, the

effects of these text genres on reading comprehension have rarely been the focus of L2 reading studies. Yet despite the fact that empirical evidence has not demonstrated that narrative texts are any less accessible to L2 readers, expository, cultural-informational texts receive far more attention in the foreign language curriculum than narrative, literary texts (Frantzen, 2002; Paesani, 2004). The exclusion of narrative texts from lower-division L2 reading curricula may reflect instructor beliefs that less-proficient learners lack the linguistic skills necessary to interpret them (Lee, 1986). Informational, expository readings may also be seen as more representative of texts that students may encounter in "real world" language use. Yet narrative texts also serve a variety of real world purposes, including reflecting readers' shared experiences, providing opportunities to interpret varied forms of discourse, and helping students to better understand the human condition (Grasesser, Golding, & Long, 1984; Jurasek & Jurasek, 1991; Paesani, 2004).

1.2 Purpose of this study

Reading in a foreign language is thus a multidimensional process involving the interaction of reader-based knowledge and skills, experiences and affect with text-based features. Previous L2 reading research has largely investigated these factors separately in what Koda (2005) deems "single-focus" studies. As Koda points out, however, many abilities and knowledge sources key to reading comprehension depend on other component skills, and their contributions therefore cannot be accounted for adequately in isolation. For this reason, the present study uses a multi-componential approach in order to identify not only reader and text-based variables that contribute to reading

comprehension, but also interrelationships between these variables and their relative contributions.

The present study also seeks to determine the relative difficulty of narrative and expository text genres in L2 reading, as well as the contribution of individual differences to comprehension of each genre. Though L1 studies have consistently shown that narrative texts are easier to understand and recall than informational texts, the few L2 studies examining these text genres have reached different conclusions about their relative difficulty. The question of how individual reader differences contribute to comprehension of each genre in the L2 has not been thoroughly investigated.

Finally, this study examines readers' affective reactions to the narrative and expository genres as well as to reading particular texts.

1.3 Summary of research questions

The research questions posed by this study relate to the contributions of individual reader differences to L2 reading comprehension and to comprehension of the narrative and expository genres, the effects of these genres on L2 reading comprehension, and the affective reactions of readers to each genre and to the experimental texts. These questions, which will be presented in detail in Chapter 3, can be summarized as follows:

1) What are the contributions of readers' L2 proficiency, L1 reading ability, metacognitive knowledge, L2 exposure, motivation and anxiety to L2 reading comprehension? What are the relationships between these individual differences in a model of L2 reading comprehension?

2) Is there a difference in L2 reading comprehension due to text genre (narrative and expository)? Are there differences in comprehension of each genre by learner level (beginning, intermediate, advanced)? Are there differences in the contributions of individual difference variables to comprehension of each genre?

3) What are learners' affective reactions to reading each genre in the L2? Do they prefer reading narrative or expository texts in the L2? Are there differences in these reactions by learner level? What are learners' affective reactions to reading the texts in this study? Do these reactions differ by genre, or only by text?

1.4 Significance of this study

The findings of this study are expected to contribute to L2 reading research and instruction in several ways. First, identifying the relative contributions of individual differences to reading comprehension, and the interrelationships between these differences, will help account for previously unexplained variance in comprehension. Bernhardt's (2005) review of L2 reading studies concluded that collectively, existing research accounts for only about 50% of L2 reading comprehension variance, which includes variance explained by L1 reading ability and L2 knowledge. By examining other types of reader differences, including those in metacognitive knowledge, language exposure, motivation and anxiety, the present study should account for a greater percentage of this variance and should contribute to a more complete model of individual differences in L2 reading. Expected contributions of L2 proficiency, metacognitive knowledge and language exposure to L2 reading should also provide support for interactive theories of second language reading (Carrell, Devine, & Eskey, 1998). These

theories explain L2 reading as an interaction of linguistic decoding processes, which are dependent on L2 proficiency, with processes drawing on readers' prior knowledge, which may include prior linguistic knowledge (L2 proficiency) and knowledge of texts and reading (metacognitive knowledge) in addition to general world knowledge.

Beyond L2 reading, the present study will provide additional insights into the role of individual differences in complex cognitive processes. The expected contributions of language exposure within a model of L2 reading comprehension will also provide support for connectionist theories of second language acquisition, which propose that language learning is experience-based and is promoted by frequent contact with the L2.

This study's analysis of individual reader differences will identify knowledge, abilities and characteristics - or combinations thereof - key to successful L2 reading. This is an important first step in developing pedagogical interventions to help less successful readers, and in identifying readers who may benefit from such interventions.

This study also seeks to fill the gap in existing L2 text genre research, which has not examined the relative difficulty of narrative and expository texts for L2 readers at various levels of instruction or the contribution of these genres to reading comprehension.

Results related to comprehension of each text genre should have implications for reading curriculum design, including identifying the types of texts that can be read most successfully at beginning, intermediate and advanced levels, and identifying the level of instructional support required for each text genre.

1.5 Definition of terms

Individual differences in L2 and psychological research refers to stable, enduring personal characteristics common to all people, but that differ in degree between people.

L2 proficiency is defined as target language knowledge and skills, including knowledge of grammar and vocabulary and listening and reading skills.

Metacognitive knowledge includes knowledge about particular learning tasks, and knowledge that allows for monitoring and regulation of these tasks.

Intrinsic motivation refers to reasons for engaging in an activity that are related to personal pleasure or interests.

Extrinsic motivation refers to instrumental reasons for engaging in an activity that are not related to intrinsic interest (e.g., to further one's career).

Amotivation is a motivational orientation where learners do not value an activity, believe their behavior has no relationship with outcomes related to that activity, and believe that engaging in the activity is a waste of time.

Narrative refers to a genre of text broadly defined as "stories". Narrative texts typically contain characters, episodes or sequences of events, temporal and spatial placements of events, and temporal or causal relationships between events. Affective engagement of the reader is one of the principal communicative intents of narrative texts.

Expository refers to informational texts. Expository texts typically convey information in a static, non-chronological manner. The primary communicative purpose of expository texts is to inform.

Semantic propositions are units of meaning that make up texts. Each proposition consists of a predicate and its arguments. According to Kintsch (1998), a reader's mental representation of a text is a network of interrelated propositions, known as a *textbase*.

Structural equation modeling (SEM) is a multivariate statistical analysis approach that permits relationships between multiple, interrelated variables to be tested. SEM analyses include *latent variables*, or theoretical constructs that cannot be directly observed (e.g., motivation, anxiety, etc.). Instead, latent variables are assessed using measurable indicators, also known as *observed variables*. SEM techniques include *confirmatory factor analysis*, in which a *measurement model* that tests whether the latent variables are satisfactorily measured by their observed indicators is constructed. Then, *structural modeling* tests relationships between predictor (*exogenous*) and outcome (*endogenous*) variables, as well as interrelationships between endogenous variables.

1.6 Overview of the chapters

In Chapter 2, I will review previous research that guided the research questions, hypothesizes and design of the pilot and main experimental studies. To begin, I will discuss studies on the role of individual differences in L2 reading, including differences in L1 reading ability, L2 proficiency, metacognitive knowledge, L2 exposure, motivation and anxiety. Next, I will define *narrative* and *expository* texts, and discuss both L1 and L2 studies that have investigated reading comprehension of both genres.

Chapter 3's focus is the methodology of the main experimental study. However, because this methodology was adapted from a pilot study, I will begin by describing the pilot study's research questions, hypotheses, methodology and results, followed by a

discussion of their implications for the main study. Then, I will present the research questions, hypotheses and methodology of the main experiment, including data scoring procedures.

Results of the main experimental study are presented in Chapter 4. I will begin with a discussion of data screening procedures. I will then present descriptive statistics and correlations for the data. This will be followed by a description of the main statistical analysis procedure used in the study, structural equation modeling, and finally the results of the statistical analyses.

In Chapter 5, I will discuss theoretical, methodological and pedagogical implications of the results before addressing the study's limitations, exploring possible avenues for future research, and presenting general concluding remarks.

CHAPTER 2: LITERATURE REVIEW

In this chapter, I will define *individual differences* and discuss existing L2 reading research on the individual difference variables that are the subject of this study. These include L2 proficiency, L1 reading ability, metacognitive knowledge, L2 exposure, motivation and anxiety. I will also define the two text genres under investigation in this study - *narrative* and *expository* - and discuss L1 and L2 studies examining the relationship of text genre to reading outcomes.

2.1 Individual differences

L2 individual difference research has long sought to determine what characteristics "good" language learners possess (MacIntyre & Noels, 1994). Broadly defined, *individual differences* include anything that identifies a person as a distinct and unique human being (Dörnyei, 2005), however, it is evident that not all of the innumerable possible differences between individuals are relevant to language learning (e.g., hair color, religious beliefs, etc.). L2 individual difference research has therefore concentrated on a subset of relatively broad factors that discriminate between individuals whose relationships with learning outcomes have been demonstrated in both L1 and L2 contexts. Among these are differences in native language ability, L2 proficiency, metacognitive knowledge, L2 exposure, and affective differences including motivation and anxiety.

2.1.1. L1 reading ability and L2 proficiency

Questions about relationships between native and target languages are central to second language acquisition research (Brown, 2007; Ellis, 2008; Gass & Selinker, 2008; Larsen-Freeman & Long, 1991). Clearly, L2 skills such as reading depend on some knowledge of the target language. However, since reading in any language involves a similar set of component skills (for example, word recognition, sentence parsing, constructing meaning from text content and making inferences beyond the content of the text, among others) and since most L2 learners have attained some level of reading competence in their native language before starting to read in the target language, it is reasonable to expect that the ability to read in one language contributes to reading in another. Alderson (1984) was among the first to wonder whether foreign language reading is "a reading problem or a language problem" (p. 1); that is, whether the source of L2 reading difficulties is inadequate native language reading skills or insufficient target language knowledge. After reviewing relevant research, Alderson concluded that both L2 knowledge and L1 reading skills have important effects on L2 reading comprehension, though L2 knowledge is the primary contributor. Subsequent empirical studies have provided strong evidence supporting this conclusion.

Carrell (1991) investigated L1 reading and L2 knowledge effects with two different groups, adult Spanish L1-ESL students (n = 45) and adult English L1-Spanish L2 students (n = 75). L1 and L2 reading ability were measured by performance on multiple-choice tests after participants read L1 and L2 expository texts, and L2 knowledge was operationalized by level of instruction. Though Carrell's reported results do not identify the individual contributions of L1 reading ability and L2 knowledge,

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together these variables accounted for 35% of reading comprehension variance among the native Spanish group and for 53% of the variance in comprehension scores among the native English group.

Other studies identifying the individual contributions of these variables have yielded relatively consistent results. Though both are important predictors of L2 reading comprehension, the contribution of L2 proficiency (operationalized variously by learner level, grammar and vocabulary knowledge, or proficiency tests including measures of grammatical knowledge and reading skills) is more substantial than that of L1 reading ability.

Using similar methodology and data analysis procedures as Carrell (1991), Bossers (1991) examined these variables with intermediate and advanced Turkish L1-Dutch L2 learners (n = 50). As measures of L1 and L2 reading ability, participants read two expository passages each in Turkish and Dutch and answered 16 multiple choice comprehension questions per text. Knowledge of L2 grammar and vocabulary as measured by a standardized test battery explained 54% of L2 reading comprehension variance, and L1 reading ability explained an additional 19%.

In Brisbois' (1995) study of beginning and upper-level English L1-French L2 students (n = 131), level of L2 instruction and performance on an L2 vocabulary translation test accounted for 57% of L2 recall comprehension variance. L1 reading ability, assessed by an English recall comprehension task, accounted for 7% of variance.

Bernhardt and Kamil (1995) examined L1 and L2 effects on comprehension with native English-speaking learners of Spanish (n = 187) at beginning, intermediate and advanced levels of instruction. L1 reading ability was assessed with two standardized

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reading tests (Nelson-Denny and the Adult Basic Learning Examination, or ABLE), L2

reading comprehension was measured by the Spanish version of the ABLE, and level of

instruction served as an indicator of L2 knowledge. Multiple regression analyses showed

that 30-38% of comprehension variance was accounted for by L2 knowledge and 10-16%

was accounted for by native language reading ability.

Lee and Schallert (1997) found a similar pattern of contributions to reading

comprehension among Korean adolescents (n = 809) learning English. L2 proficiency as

measured by vocabulary and grammaticality judgment tests accounted for 57% of

variance in scores on standardized L2 reading tests, and scores on standardized tests of

L1 reading explained 30% of L2 reading variance.

Fecteau's (1999) investigation of the effects of these two variables found, to the

contrary, that L1 reading ability is a more powerful predictor of L2 reading

comprehension than L2 knowledge. However, a methodological anomaly may explain

these divergent results. Intermediate English L1-French L2 university students (n = 42)

read two narrative texts, one in English and one in French. Text comprehension in both

languages was assessed by both multiple choice and recall measures. While multiple

regression analyses did not find a significant contribution of either L1 reading ability or

L2 proficiency to multiple-choice reading scores, possibly due to a lack of variance in

these scores, together these variables explained 48% of variance in L2 recall

comprehension. Yet in this analysis, only the contribution of L1 reading ability was

statistically significant. The lack of significant contribution of L2 proficiency, however,

appears to have resulted from the fact that an administrative problem prevented over half

of the participants (24 of 42) from taking the test of language proficiency.

Though research on the contributions of L1 reading and L2 proficiency has by and large produced consistent findings (significant contributions of both L1 reading ability and L2 knowledge to L2 reading, with a greater contribution of L2 knowledge), it has by no means accounted for all the variance in L2 reading comprehension. Most studies investigating the effects of L1 reading ability and L2 knowledge without including other individual reader differences have accounted for only slightly more than half of all variance in L2 comprehension. It is clear that other factors also contribute to the L2 reading process, and must be accounted for in any research seeking to explain reading comprehension variance.

2.1.2 Metacognitive knowledge

A limitation of studies that use L1 reading as a predictor of L2 reading is a consequence of the multifaceted nature of the reading process. Schoonen et al. (1998) propose that native language reading ability includes both language-specific knowledge, which is less likely to transfer to L2 reading, and general knowledge of reading, which is more likely to transfer. This general knowledge of reading thus must be accounted for in research examining L1 effects on L2 reading. The researchers identified the main component of this general knowledge base as metacognitive knowledge. Broadly defined, *metacognitive knowledge* includes "cognition about cognition" (Garner, 1994, p. 716), or what learners know about learning. This includes both learners' knowledge about particular learning tasks, and knowledge that allows them to monitor and regulate their progress (Wenden, 1999). Schoonen et al.'s (1998) definition underscores this twofold nature of metacognitive knowledge, which includes "knowledge about one's cognition ('knowing that') and about the regulation of that cognition ('knowing how')" (p. 74). In

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their study of 685 Dutch L1-English L2 schoolchildren in grades 6, 8 and 10, the researchers found that self-reported knowledge about texts, or "knowing that", and knowing about reading strategies, or "knowing how", were more significant predictors of both L1 and L2 standardized reading test scores than other types of "meta" knowledge, such as knowledge of reading goals and self-assessed reading ability.

Schoonen et al. (1998) also confirmed that metacognition functions cross-linguistically, contributing to both native and target language reading comprehension. They found no significant difference between the contributions of metacognitive knowledge to L1 and L2 reading comprehension scores among Grade 8 and 10 students (Grade 6 participants in the study did not take the L2 reading comprehension test). After metacognitive knowledge was partialled out, the amount of shared variance between L1 and L2 reading dropped from 38% to less than 1%, indicating that metacognition explains in large part the relationship between native language and target language reading. A follow-up study of Dutch schoolchildren validated the finding that metacognitive knowledge is activated in reading in both languages. In a model comparing components of L1 and L2 reading, Gelderen et al. (2004) found that metacognitive knowledge made significant unique contributions to both L1 and L2 reading among these participants (n = 397), as measured by scores on multiple choice tests. Adding metacognitive knowledge to a model of L2 reading that also included L1 reading ability and L2 knowledge also allowed the researchers to account for more L2 reading comprehension variance (83%) than previous studies that did not include metacognition as a variable.

Further analyses by Gelderen et al. (2004) revealed complex interrelationships between L1 and L2 knowledge and ability and metacognitive knowledge. When L1

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reading ability was added to a model of L2 reading that included L2 grammar and vocabulary knowledge, metacognitive knowledge, and word and sentence recognition speed, metacognition was no longer a significant predictor of L2 reading comprehension. Instead, L1 reading ability made the largest contribution to L2 reading performance, with L2 vocabulary knowledge its only other significant predictor. The researchers explained the diminished contribution of metacognition in this model by its strong relationship with native language reading ability, resulting in the "takeover" of metacognition's predictive role by L1 reading ability. Otherwise stated, metacognition may contribute to target language reading comprehension indirectly through its contribution to native language reading ability. These results underscore the importance not only of including measures of metacognition in L2 reading research, but also of using research designs and data analysis procedures that allow examination of the interrelationship and moderating effects of these individual difference variables on comprehension.

2.1.3 L2 exposure

2.1.3.1 Language exposure and L2 development

Language learning is widely understood as a process of hypothesis formation and testing based on available language input (Koda, 2005). Learners use L2 input encountered while reading, writing, speaking and listening to make connections between linguistic forms and their meanings, and to determine the probability that these form-meaning patterns will occur. As learners are exposed to more language, the processing of this language, or the "mapping" and retrieval of these patterns, becomes automatic. Under this connectionist view, language learning is thus experience-based and facilitated by frequent language contact. Ellis (2002) maintains that frequency of exposure to

language plays an important role in developing and retrieving these patterns, or in other words, "(language) learning accords to the power law of practice" (p. 144).

2.1.3.2 Language exposure and L2 reading development

The contributions of written language contact to reading comprehension have been observed in both L1 and L2 contexts. Stanovich's (1986) analysis of L1 studies concluded that reading practice outside of the classroom is one of the most important factors differentiating good and poor native-language readers. Numerous L2 studies have revealed strong relationships between print exposure and gains in various measures of L2 literacy. Elley and Mangubhai (1983) found that Fijian schoolchildren who participated in an extensive reading, or "book flood", program where they read for 20-30 minutes a day had significantly greater gains in L2 reading comprehension and grammar knowledge than a control group that followed a standard English curriculum containing very little reading. Follow-up testing after one year showed that these gains persisted over time.

Elley's (1991) review of subsequent reading programs, also mainly with Pacific island schoolchildren, noted that increased exposure to print resulted in rapid growth in a wide-range of measures of L2 development. Students were exposed to reading materials in these programs through "shared-book" approaches, where reading and discussion of books served as the basis of classroom L2 instruction, or through extensive reading or reading aloud. In all cases, groups who participated in these reading programs outperformed control groups who received form-focused instruction in reading and listening comprehension, vocabulary and grammar knowledge, and writing and speaking skills.

Among adult ESL students, L2 free reading amount has also predicted a more general measure of language skill, TOEFL scores. Constantino et al. (1997) operationalized reading amount as the frequency with which students reported reading English newspapers, engaging in free reading, reading English books for fun, and the number of English books they reported reading before taking the TOEFL. Though free reading amount was a significant predictor of TOEFL scores using multiple regression analysis, the researchers argue that free reading amount is potentially a stronger predictor than their results indicate, as participants reported engaging in very little free reading in English.

Qualitative studies of ESL students have revealed that exposure to high-interest reading materials may also facilitate comprehension by encouraging readers to focus on text meaning instead of on decoding individual words. Kim and Krashen (1997) found that when adult Korean L1-English L2 readers were provided with an interesting novel in English, they "just read on" and "didn't care about words [they] couldn't understand" because reading the story was "so much fun" (p. 28).

The importance of language exposure to literacy development also extends beyond the exposure to the printed word. Oral language exposure appears to have similar benefits in reading comprehension. The strong relationship between oral language and reading development has been well documented in L1 studies, where the ability to pronounce written words has consistently predicted reading success among children (Bowers, Golden, Kennedy, & Young, 1994; Share & Stanovich, 1995; Wagner, Torgeson, & Rashotte, 1994). Koda (2005), in fact, concludes that the ability to decode oral language phonologically may be the key competency in reading acquisition in all

languages. Given this relationship, it is not surprising that measures of proficiency related to oral language have predicted L2 reading success. In a study of Spanish L1-English L2 schoolchildren, Proctor, August, Carlo, and Snow (2005) found that listening comprehension skills and oral vocabulary knowledge were more powerful predictors of L2 reading comprehension than written word decoding. In the same way that exposure to print contributes to reading development, exposure to oral language should facilitate comprehension of spoken language, which in turn will contribute to reading development.

University students may also have substantial contact with the target language through study abroad experiences. Of more than 223,000 American students who studied abroad in the 2005-2006 academic year - an increase of 150% over the last decade - more than 75% studied in countries whose primary language is not English (Chin & Bandari, 2007). Using a version of the Language Contact Profile (Freed, Dewey, Segalowitz & Halter, 2004), an instrument that asks students to report the amount of time they spend engaging in various types of L2 exposure, as well as interviews and observations, Dewey (2004) found that students studying abroad in Japan ($n = 15$) spent significantly more time reading and interacting with native speakers than students enrolled in a Japanese immersion program in the United States ($n = 15$). However, this increased L2 contact did not translate into significant differences in gains on reading comprehension measures between the two groups, likely because of variability in both the amount of contact and the reading scores of the study abroad group. Study abroad, nonetheless, exposed students to significantly more target language, and among a larger sample size a

significant relationship between this increased language contact and reading outcomes would be expected.

Carrell (1991) in fact proposed that the superior performance of Spanish-speaking ESL students studying in the U.S. on multiple-choice reading tests compared to that of native English-speaking students studying Spanish in the U.S. resulted from differences in learning context and language exposure. Learners studying in a second language setting were immersed in the target language both inside and outside of the classroom, whereas those studying in a foreign language setting had limited, mainly classroom-based L2 exposure.

2.1.4 Motivation

2.1.4.1 Motivation and L2 learning

A substantial amount of research suggests that individual affective differences, including motivation, may predict language learning outcomes. Dörnyei (2005) maintains that motivation "provides the primary impetus to initiate L2 learning and later the driving force to sustain the long and often tedious learning process" (p. 65). Though the term *motivation* is often used to designate a single, monolithic entity, L2 motivation research has provided much evidence that it is a complex and multidimensional construct. Social psychologists Gardner and Lambert (1959, 1972) were the first to identify motivational components related to language learning. In exploring the relationship between motivational orientations, or classes of reasons for learning another language, and L2 outcomes, they identified two possible learner orientations: integrative and instrumental. An integrative motivational orientation reflects a desire to interact with and be accepted by the target language community, whereas an instrumental motivational orientation

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indicates a practical or extrinsic purpose for language learning (e.g., in order to get a good job). These orientations became the basis of Gardner's (1985) socioeducational model of second language acquisition, which conceptualized motivation as the interaction of learner orientations with attitudes towards the language and the learning situation. While Gardner's early studies of Canadian English-speaking learners of French showed that integrative orientations were stronger predictors of achievement (Gardner & Lambert 1972; Gardner 1985), subsequent studies have shown that instrumental orientations can also influence learning. Dörnyei (1990) found that Hungarian native-speaking adults' ($n = 134$) instrumental reasons for learning English (for example, for professional advancement) were strongly correlated with their desire to achieve intermediate levels of language proficiency. Gardner and MacIntyre (1991) examined the effects of both types of motivation on French vocabulary learning among English L1 college students ($n = 92$). The researchers created an instrumental motivation condition for half the participants by offering to pay them $10 if they missed no more than two answers on the sixth trial of a computerized English-French paired-associates vocabulary test, a test procedure that allowed students to review their answers and study the correct word pairs during each trial. Students in the instrumental motivation condition had significantly higher vocabulary test scores than those who were not promised the incentive. Participants' levels of integrative motivation were also assessed with a self-report questionnaire, and similar results were obtained for high versus low integratively motivated students. Both types of motivation also had considerable effects on participants' behavior in learning the word pairs. Students with high integrative motivation and those in the instrumental

motivation condition spent significantly more time viewing the English words, reviewing their French answers and studying the English-French pairs.

Some scholars, however, have questioned the emphasis that Gardner's socioeducational model places on the integrative-instrumental distinction, especially in foreign language contexts where opportunities for interaction with target language communities are rare. Dörnyei (1990) noted that foreign language learners often have not had enough contact with the target language community to form attitudes about it, therefore they may not be as influenced by a desire for contact and integration as learners in second language environments. In light of such considerations, Noels and associates reconceptualized motivation using a cognitive rather than socioeducational approach. Using the theoretical framework proposed by Deci and Ryan's (1985) self-determination theory, Noels, Clément, and Pelletier (1999) and Noels, Pelletier, Clément, and Vallerand (2000) identified three alternative orientations towards language study among English-speaking learners of French: intrinsic orientation, or reasons related to one's personal pleasure or interests, extrinsic orientation, or reasons instrumental to a consequence unrelated to inherent interest (e.g., to get a job), and amotivation, an orientation where learners do not value language study, believe their behavior has no effect on language learning outcomes, and think that they are wasting their time studying a language. In a subsequent study Noels, Clément, and Pelletier (2001) proposed that integrative motivation might be subsumed into this three-orientation model. In analyzing self-report questionnaire responses by French-Canadian learners of English, they found that what Gardner (1985) had identified as integrative reasons for language study (e.g. "I love the...culture and the language is beautiful") (p. 52) correlated highly with intrinsic

motivation. Qualitative research also suggests that in certain contexts integrativeness may not be distinguishable from other motivational orientations. After analyzing Indonesian schoolchildren's ($n = 219$) responses to open-ended questionnaire items and interview questions about their reasons for learning English, Lamb (2004) concluded that "integrative and instrumental orientation are difficult to distinguish as separate concepts. Meeting with westerners, using computers, understanding pop songs, studying or travelling abroad, pursuing a desirable career—all these aspirations are associated with each other and with English" (pp. 14-15).

2.1.4.2 Motivation and L2 reading

A range of studies have found strong relationships between motivation and various measures of L2 development, including vocabulary learning (Gardner, 1985; Gardner, & MacIntyre, 1991), listening comprehension (Vandergrift, 2005), writing skills (Tremblay & Gardner, 1995), grades or evaluations by teachers (Clément, Dörnyei & Noels, 1994; Clément & Kruidenier, 1985; Noels, et al., 2001; Samimy & Tabuse, 1992; Wen, 1997), and overall L2 proficiency (Gardner & Lambert, 1972; Gardner, Tremblay, & Masgoret, 1997). These results would suggest that motivation could have similar effects on L2 reading. L1 reading studies provide persuasive evidence of a link between reading performance and motivation. In both cross-sectional and longitudinal studies of children, Gottfried (1990) established that intrinsic academic motivation was a significant predictor of reading and other academic success as measured by standardized tests and teacher ratings. Baker and Wigfield (1999) found moderate correlations between both intrinsic and extrinsic motivations and 5th and 6th grade girls' scores on standardized reading tests. Some L1 research suggests that as readers mature, the relationship between

motivation and reading outcomes is strengthened. Whereas Guthrie et al. (1999) reported no significant relationship between elementary and middle-school students' motivation and reading achievement, a second study of high-school students revealed strong correlations between general reading motivation, a construct reflecting both intrinsic and extrinsic motivational orientations, and performance on a reading test.

Before examining its effects on reading outcomes, L2 reading motivation research first sought to identify the components of motivation to read in another language. Componential studies have confirmed that intrinsic, extrinsic, and amotivation orientations also exist for L2 reading. Using factor analysis of questionnaire results, Mori (2002) identified intrinsic and extrinsic value as two main subcomponents of motivation to read in a foreign language among Japanese L1 learners of English (n = 447). Two other components, readers' expectancy of success and their assessment of the importance of reading, also emerged. Kondo-Brown's (2006) research with English L1 students of Japanese (n = 43) identified four related components of L2 reading motivation based on students' responses on self-report questionnaires: intrinsic orientation, extrinsic orientation, amotivation and self-perception, which was analogous to the readers' expectancy of success factor described by Mori. Mori's follow-up study (2004) with Japanese learners of English (n = 100) provided evidence that componential differences between L2 reading motivation and motivation to study L2 exist. Though intrinsic value emerged as a factor for both types of motivation, extrinsic motivation was associated with motivation for L2 study but not L2 reading. Learners' perception of the importance of success was a factor in both reading motivation and general L2 study motivation.

Though not abundant, L2 research has begun to examine these motivational

factors in relation to reading outcomes, including reading amount and reading

comprehension. Studies examining motivation's effects on reading amount have not

produced consistent results. In the same study described above, Mori (2004) found little

relationship between reading amount and motivation among participants in a Japanese

L1-English L2 extensive reading program. Only students' motivational intensity for L2

study as measured by reported study habits and their intrinsic interest in the stories that

they read predicted the amount read, but these two contributing factors were negatively

correlated to reading amount; those who did not perceive themselves as diligent English

students or who found the stories boring read less. In other words, lack of interest and

lack of motivational intensity caused students to read less, but intrinsic interest in the

reading material and high motivational intensity did not motivate students to read more.

Other intrinsic and extrinsic motivational factors were not significant predictors of

reading amount. Yamashita (2004) found that attitudes towards reading such as comfort

and self-perception of reading ability as measured by a self-report questionnaire

contributed to the average number of pages of extensive reading done per week by

Japanese-speaking learners of English, but extrinsic motivational factors such as readers'

perception of the value of reading did not affect reading amount.

To date, only a handful of studies have examined the contributions of

motivational factors to L2 reading comprehension, and they have obtained dissimilar

results. Brantmeier's (2005) research with advanced college-level English L1-Spanish L2

students ($n = 88$) provides evidence that intrinsic factors contribute to reading

comprehension. Brantmeier found that self-report questionnaire items assessing L2

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reading enjoyment had a significant effect on recall comprehension of an authentic narrative passage in Spanish. Though no relationship between enjoyment and a second comprehension measure, multiple-choice test scores, was found, this likely resulted from the lack of variance in these scores. In a subsequent study with a similar participant group ($n = 104$) using the same narrative text, Brantmeier (2006) found that the intrinsic factors of personal interest in the text and engagement with the text, also assessed through self-report questionnaires, predicted scores on sentence completion and multiple-choice reading tests, but not recall comprehension. The absence of a relationship between recall comprehension and these factors, however, may have resulted from students' relatively poor performance on the recall measure, which the researcher attributes to the length of the reading passage (1218 words). In contrast, Kondo-Brown (2006) found no significant correlations between advanced English L1-Japanese L2 ($n = 43$) students' intrinsic motivation for L2 reading or study and either of two measures of reading comprehension, a multiple-choice reading test and a test of *kanji* knowledge. Extrinsic motivational orientations also failed to correlate with reading comprehension, but amotivation for reading Japanese had a significant negative relationship with both comprehension measures.

The failure of these studies to find consistent, direct effects of intrinsic and extrinsic motivational factors on reading comprehension may stem from the fact that they investigated motivation in isolation from other cognitive, experiential and behavioral individual differences. Dörnyei and Kormos (2000) argue that while motivation is strongly related to achievement, its effects on learning outcomes may be indirect:

...from a theoretical point of view, the relationship between motivation and achievement is not straightforward. Motivation as a psychological term is used to refer to the antecedent of action rather than achievement. It is true that motivated learners will demonstrate more effort and persistence in their task behaviour, which in turn can lead to increased achievement. However, this relationship is indirect, because achievement is also influenced by a host of other factors, most notably the learners' ability, learning opportunities and the instructional quality of the learning tasks. (pp. 281-282)

Thus, motivation may operate indirectly on L2 reading comprehension by influencing other behaviors and experiences. Research discussed in previous sections of this chapter has shown that variables such as L1 reading ability, L2 knowledge, metacognition, and language exposure have important and often direct effects on L2 reading. The relationship between motivation and reading may be moderated by some of these other variables. For example, motivation may prompt students to gain more L2 exposure by reading, watching films or listening to music in the target language, to take advantage of opportunities to communicate in the L2, to improve their L2 knowledge through study and practice, and to use comprehension strategies while reading the target language.

2.1.5 Anxiety

The notion that anxiety plays an inhibitive role in language acquisition owes much to the influential works of Stephen Krashen (1982, 1985). Krashen argued that language is acquired though exposure to comprehensible L2 input, but that a high "affective filter" prevents learners from integrating this input into their developing language systems. Anxiety was identified as a key component of this affective filter.

Though Krashen's hypotheses have been the subject of criticism and debate (Gregg, 1987; Lee & VanPatten, 2003; McLaughlin, 1987), the idea that anxiety acts as a roadblock to language learning remains intuitively appealing. Perhaps this is because most people who have studied another language can recall at least one (if not many) difficult, anxiety-filled moment in their L2 learning experiences. Horwitz and Young (1991) in fact maintain that anxiety is prevalent among language learners, producing debilitating effects among about half of those who engage in L2 study.

Gardner and MacIntyre (1993) define *language anxiety* as fear or apprehension experienced when a learner is expected to perform in the target language. Horwitz, Horwitz and Cope (1986) argue that language anxiety is distinct from general anxiety and other types of performance anxiety because it is directly related to performing in the L2. Subsequent research reviewed by Horwitz (2001) has confirmed that foreign language anxiety is an independent construct, correlated only weakly with general anxiety and other types of learning anxiety, such as test anxiety. A large body of research has demonstrated strong and consistent negative relationships between language anxiety and various types of L2 achievement, including course grades (Aida, 1994; Horwitz, 2001; Saito & Samimy, 1996), proficiency test scores (Ganschow, Sparks, Anderson, Javorshy, Skinner, & Patton, 1994; Gardner, Lalonde, Moorcroft, & Evers, 1987; Gardner & MacIntyre, 1993; Yamashiro & McLaughlin, 2000), listening comprehension (Elkhafaifi, 2005), and oral and written production (Young, 1986).

Some researchers, nonetheless, have argued that "helpful" language anxiety may exist. Scovel (1978) proposed that anxiety facilitates language learning by increasing students' attentiveness. In a study of adults (n = 855) in intensive language courses,

Ehrman and Oxford (1995) found evidence of both helpful and harmful language anxiety. Self-reported anxiety about speaking in class, as measured by questionnaire items taken from the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz, et al., 1986) was highly and positively correlated with measures of both speaking and reading proficiency, however, other negatively worded questionnaire items on anxiety (e.g., "It upsets me when others do better than I") (p. 79) were significantly and negatively correlated with both measures of proficiency. The researchers noted that anxiety may motivate students to study more, which on its face would seem helpful to language learning. However, the researchers further observed that this increased study, or "overstudying", is often counterproductive, citing the case of a woman whose anxiety about making mistakes in her beginning Spanish class pushed her to study eight hours a day without any corresponding improvement in performance.

Other research has pointed to differences in L2 anxiety depending on the language task. Speaking is widely considered the most anxiety-provoking L2 activity (Horwitz et al., 1986) since it involves "face-threatening" risks: speakers must reveal themselves and their (possibly deficient) language skills, and subject themselves to immediate (and possibly negative) evaluation by their interlocutor. Receptive language skills such as reading appear to inspire less anxiety than speaking. Kim (1998, cited in Horwitz, 2001) found that Korean EFL students enrolled in a reading class had significantly lower levels of language anxiety as measured by the FLCAS questionnaire than those enrolled in a conversation class. Using both the FLCAS and an adapted version of this questionnaire measuring reading anxiety, Saito, Horwitz, and Garza (1999) similarly found that

students of French, Japanese and Russian experienced less reading-related anxiety than general foreign language anxiety.

Nonetheless, anxiety cannot be ignored as a negative predictor of reading outcomes. Argamon and Abu-Rabia (2002) found significant negative correlations between foreign language learning anxiety as measured by a subset of questions from the FLCAS among adolescent Hebrew L1 learners of English ($n = 68$) and scores on a true-false reading comprehension test. Using written recalls to assess comprehension, Sellers (2000) reported a similar significant negative relationship between reading comprehension and reading anxiety questionnaire items among English L1-Spanish L2 students ($n = 89$). This correlational research, however, cannot be taken as evidence that anxiety is a proximate cause of poor L2 reading performance. It is quite probable that, like motivation, anxiety has indirect effects on reading comprehension by contributing to related behaviors. Horwitz et al. (1986), for example, observed that anxious language students may avoid studying, skip class or avoid participating in class in an effort to relieve their anxiety. Thus, it would not be unexpected that language anxiety negatively affects reading comprehension by decreasing language exposure and deterring learners from taking advantage of opportunities to develop L2 knowledge and proficiency.

2.1.6 Summary

Research has provided evidence of relationships between individual differences in L1 reading ability, L2 proficiency, metacognition, L2 exposure, motivation and anxiety and L2 reading outcomes. In studies investigating the relative contributions of L1 reading ability and L2 proficiency, the latter has quite consistently accounted for more reading comprehension variance than L1 reading ability among cross-sections of L2 learners.

However, adding metacognition as a predictor variable may help account for additional L2 reading variance, and may change the relative contributions of L1 reading and L2 knowledge to L2 reading comprehension.

Exposure to the target language is another important contributing factor to language and literacy development. Frequent contact with L2 input promotes connections between language forms and meanings, and promotes automaticity of retrieval of these form-meaning patterns. Since both written and oral language exposure have been shown to make sizeable contributions to reading development, it is important to measure exposure to these types of language in the many forms in which language learners may encounter them.

Existing research provides support for a three-factor model for motivation, comprised of intrinsic motivation, extrinsic motivation, and amotivation. Motivation and these component orientations have important effects on L2 development, including general language proficiency and specific language skills such as listening and writing. The contributions of these motivational orientations to L2 reading comprehension, however, have not been convincingly established in the studies that have investigated this question. Whereas Brantmeier (2005, 2006) found that intrinsic factors such as enjoyment may positively influence reading comprehension, Kondo-Brown (2006) found that only amotivation, not intrinsic or extrinsic motivation, had significant predictive effects on L2 reading comprehension. However, since it is posited that motivation has indirect effects on achievement by influencing other behaviors and experiences (Dörnyei & Kormos, 2000), the lack of consistent, direct relationships in these studies cannot be taken as evidence that motivation is not implicated in L2 reading. Evidence of

relationships between other motivational factors, including motivational intensity and self-perceived ability, and reading amount also exist (Mori, 2004; Yamashita, 2004), suggesting that motivation indeed may shape behaviors that contribute to reading performance instead of directly causing that performance.

Although there is some evidence that certain types of anxiety may play a facilitative role in language learning, the preponderance of language anxiety research has revealed significant, negative relationships with L2 learning outcomes. Similar negative relationships between language anxiety and reading comprehension have also been observed, though the correlational nature of these relationships precludes drawing definitive conclusions about anxiety's direct effects on reading comprehension. Instead, language anxiety may operate indirectly on reading comprehension by discouraging learners from L2 contact or study.

2.2 Text genre

In the previous section, I have presented evidence that characteristics particular to individual readers make important contributions to L2 reading. Because reading involves an interaction between reader and text, logically, characteristics of the particular text that is read should also play an important role in L2 reading processes. Though, like people, no two texts are exactly the same, texts can be classified into different genres based on common features or communicative intents. In this section, I will provide definitions of two of these genres, narrative and expository, and discuss both L1 and L2 research on genre's role in reading.

2.2.1 Narrative and expository genres

Although there is no prevailing consensus on a precise definition of *narrative text*, an imprecise definition might be that narrative texts are "stories". Graesser et al. (1991) note that whether they relate actual or fictitious events, narratives are composed of story-like elements, such as characters, temporal and spatial placements ("A long time ago in a galaxy far, far away…"), and episodes or sequences of events. Larsen (1984) maintains that a recounting of these events is the hallmark of narrative texts. In addition to being situated in a particular place and time, events in narratives typically unfold over some period of time. These chronological events also share causal relationships. For example, narratives usually describe complications or problems that the main character(s) encounters (e.g., Little Red Riding Hood discovers a big, bad wolf in her grandmother's bed), and subsequent events are related to the resolution of the complications. Graesser, et al. (1991) also observe that narratives are intended to arouse affective reactions in the reader. Narratives are typically written to entertain the reader in some way, and do so by manipulating readers' emotions such as curiosity, surprise, amusement or suspense.

Expository texts, on the other hand, are intended to inform. Instead of recounting an episodic story, expository texts use communication strategies such as orientation and clarification to convey information to the reader (Larsen, 1984). Whereas narratives describe events that develop over time, expository texts often communicate information in a static, non-chronological fashion. Unlike narratives, expository texts are usually not intended to engage readers affectively. Though expository texts certainly may elicit affective reactions in some readers, arousing an emotional response is typically not among the author's primary communicative purposes.

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Weaver and Kintsch (1991) thus summarize the differences between the two genres as such: "…the main thrust of expository texts is to communicate information so that the reader might learn something. The main focus of a narrative text is to tell a story so that the reader may be entertained." (p. 230). However, they also concede that the distinction between expository and narrative texts is not absolute. Narrative texts such as fables, for example, have a clear didactic purpose. Expository texts like newspaper or magazine articles may contain some narrative elements (for example, describing an episode or a sequence of events), and may be entertaining as well as informative.

It is also important to note that these two genres represent only a general level of text classification. Within each text genre, a variety of subgenres exist. Novels, short stories and plays can all be categorized as narratives, for example, while the expository genre includes texts such as essays, news reports, or journal articles.

2.2.2 Text genre and L1 reading

L1 studies have overwhelmingly shown that narratives are easier to comprehend and recall than expository texts. These results have been consistent for both child and adult readers. Zabrucky and Ratner's (1992) study of 6th grade children found that students recalled significantly more from reading narrative texts than expository texts. The researchers further observed that reading expository passages required significantly more effort, as measured by "lookbacks" or re-readings of portions of the text, and longer reading times than the narrative passages. In two studies with college students (Kintsch & Young, 1984; Kozminsky, 1977), participants read one narrative and two types of expository texts, a description and a report. Students recalled significantly more from the narrative texts (on average, 30-33% of all text propositions) than either the descriptions

(20-26%) or the reports (12-20%). Graesser et al. (1980) also found significant

differences between narrative and expository text comprehension by college students

using a recall measure. 62% of narrative propositions were recalled, compared to only

37% of expository propositions. The researchers had asked other students to judge the

narrativity of each passage using Likert-scale ratings, where the least narrative passages

described "static information" and the most narrative described "active information with

events unfolding over time". When degree of narrativity was used as a predictor of recall

comprehension in a multiple regression analysis, it explained a hefty amount of variance

(84%) in these scores.

Superior outcomes for narrative texts have also been observed in studies

comparing reading comprehension between groups of young adults and senior citizens.

Tun (1989) found that both college students and older adults (aged 65-80) comprehended

significantly more from narrative texts as assessed by both a recall measure and a

multiple-choice test. Young adults recalled 51% of propositions from narrative texts and

scored 92% on the narrative multiple-choice test, compared to 41% recall and 88%

multiple-choice scores for expository texts. Older participants recalled 31% of narrative

propositions and answered 93% of multiple-choice questions correctly; their expository

comprehension scores were 19% for recall and 73% for multiple choice. Petros, et al.

(1989) reported a similar trend in a study where texts of each genre were presented orally

instead of in writing. Both young adults and seniors recalled significantly more

propositions from narrative texts (72% and 60%, respectively) than from expository texts

(57% and 39%).

Some of the unique features that distinguish narratives from expository texts also seem to explain their superior comprehensibility. As described in section 2.2.1, narratives are characterized by both temporal and causal cohesiveness. Certain theorists propose that this type of coherence facilitates the creation of a mental model of the text, the retrieval of related information from memory, and the integration of this information into the mental text model. According to Kintsch (1988, 1998), texts are composed of a series of propositions, each consisting of a predicate and one or more arguments. Reading is a process of connecting the text's propositions into a semantic network called a *textbase*, or the reader's mental representation of the text's meaning. This textbase includes a *microstructure,* representing the surface form of the text (i.e., actual words and phrases), and a *macrostructure*, representing relationships between individual propositions contained in the text, or what is more commonly described as the "gist" of the text. Kintsch (1998) argues that the ability to form this macrostructure is the key to reading comprehension: "for comprehension and memory, the gist of the text – expressed formally by the macrostructure – is usually what matters most" (p. 67). Kintsch and Young (1984) maintain that narrative text structures promote macrostructure development, and therefore comprehension and memory of the text, because of their cohesiveness. The salient temporal and causal cues contained in narratives also help readers to efficiently retrieve both textual information and prior knowledge (sometimes called *schemata*) from memory and to integrate it into their mental representation of the text.

The familiarity of narrative structure also appears to play an important role in comprehension of this genre. Koda (2005) notes that whereas formal training may be

required to recognize the structure of exposition and argumentation, narrative story structures are familiar even to young children who can not yet read or write. Graesser et al. (1991) propose that the event sequences that comprise narrative texts are so familiar to us because they also characterize our personal, everyday experiences. Otherwise stated, we live stories, and we see familiar reflections of our own stories in narrative texts.

2.2.3 Text genre and L2 reading

Given the overwhelming evidence of narratives' superior comprehensibility in L1 settings, it would be expected that similar results would be obtained in L2 contexts. However, very little research examining the relationship of the narrative and expository genres to reading comprehension has been conducted with L2 learners, and the few L2 studies that have reported comprehension scores for narrative and expository texts have reached divergent conclusions.

Bullock and Lantolf (1987) used an excerpt from a narrative short story and an expository text on insects to compare English native and nonnative speaker performance on cloze tests for each genre. Although one group of nonnative speakers, students taking a year-long advanced English class to prepare them for graduate school ($n = 9$), scored much higher on the narrative cloze test (75%) than on the expository test (51%), another group of nonnative speaker graduate students ($n = 11$) had virtually identical scores on both measures (narrative 97%, expository 94%). However, no statistical comparison of these scores was performed to determine whether these differences were significant.

In Bensoussan's 1990 study, translation of L2 texts into the L1 was used to measure reading comprehension of narrative and expository texts. Advanced university EFL learners ($n = 105$) read an expository text in English about paranoia and then

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translated it into Hebrew, their native language. A separate group of advanced EFL

learners (n = 60) read a narrative excerpt from an F. Scott Fitzgerald story in English and

translated it into their native language (Hebrew or Arabic). The researcher analyzed each

text according to discourse aspects including both local (word and sentence-level) and

global level (units of meaning involving more than one sentence) structures; these

analyses were then compared to the participants' translations. Bensoussan found

significantly higher mistranslation rates for the narrative than the expository text (335 and

190 mistranslations, respectively) across nearly all discourse categories. The narrative

text translations included more mistranslations of propositional content, vocabulary and

expressions, pronoun agreement and communicative function (e.g., translating what was

a neutral statement by the author as a positive or negative opinion). The only discourse

category that proved more problematic for expository texts was the local-level feature of

grammatical cohesion, or the translation of linking and transition words that connected

ideas (e.g, *moreover, therefore, because*).

In contrast with these findings but consistent with L1 research, DuBravac and

Dalle (2002) found greater miscomprehension of expository texts. Instead of a translation

task, the researchers used student-generated questions to assess comprehension.

Intermediate-level English L1-French L2 students (n = 47) read one of two narratives and

one of two expository texts. Expository texts were taken from French daily newspapers,

and narrative texts were excerpted from contemporary literary works. Both the researcher

and the students' instructor judged all texts comparable in subject matter, difficulty,

phrase length and syntactic and lexical complexity. Each text was divided into five

sections; upon reaching the end of each section, participants were instructed to formulate

a question whose goal was to assess how well another person reading the text would have understood that section. The number of questions indicating that the students had misunderstood parts the text was significantly higher for expository texts: 24%, compared to a 6% miscomprehension rate for narrative texts.

Methodological differences between these two studies may explain their incompatible findings. First, because different groups of students read each text type in Bensoussan's (1990) study, the results may have been influenced by any number of individual reader differences within these two groups. Furthermore, her results showing greater difficulty in comprehending the narrative text were likely affected by differences between the two texts. While Dubravac and Dalle (2002) made attempts to control for topic familiarity, difficulty and complexity of grammar and vocabulary between the narrative and expository texts, Bensoussan (1990) notes that in her study the texts representing each genre were not necessarily equivalent. She observes that the expository text used everyday language and did not require specialized knowledge to understand, whereas the narrative text contained difficult vocabulary and idiomatic language as well as potentially unfamiliar social and cultural references. Finally, the difference in tasks (translation versus question formation) may also have accounted for differences in results. Although it may true, as Bensoussan (1990) explains, that translation "is closely linked to the reading process; only those text elements that have been read and comprehended can be adequately translated" (p. 51), it can also be argued that reading and translation are two distinct skills. Indeed, the author concedes that the translation task itself may have been the source of some errors. DuBravac and Dalle's (2002) question formation task also has pitfalls. The authors acknowledge that because participants were

not required to supply the answers to questions they had formulated, in certain cases it could not be verified that the questions they generated demonstrated that they had indeed understood the text.

These L2 genre studies also limited their investigation to one level of learner, either intermediate (Dubravac & Dalle, 2002) or advanced (Bensoussan, 1990; Bullock & Lantolf, 1987). Other reading research, however, suggests that learners' level of language proficiency may determine how well they are able to exploit the features of different text structures. Horiba (1990), for example, found differential effects of proficiency level on the amount of attention paid to local and global text features. A think-aloud protocol was used to compare the mental reading processes between these proficiency groups. After reading each sentence of a narrative story, participants (9 native Japanese speakers, 11 nonnative advanced Japanese speakers) reported what they were thinking about when reading. Quantitative and qualitative analyses of their comments revealed that nonnative speakers attended significantly more to local (word and sentence-level) text features, whereas native speakers concentrated on global text comprehension. Nonnative speakers frequently made comments about their efforts to decode words and phrases, whereas native speakers made no comments about the linguistic features of the text. Instead, native speakers commented significantly more about making inferences and connecting the text to their general knowledge. Chen and Donin (1997) reported similar results in a study of Chinese L1-English L2 university students ($n = 36$). The researchers operationalized lower-level text processing as the amount of time taken to read each of two expository texts in English, as longer reading times are associated with additional mental effort required to decode words and sentences. Learners at low-intermediate and

intermediate levels spent significantly more time attending to these local-level text features than high-intermediate and high proficiency learners. These results suggest that lower-level learners may be less able to take advantage of genre-level text cues that facilitate comprehension, such as the salient temporal and causal relationships between events in narrative texts.

2.2.4 Summary

Narrative texts engage readers in unparalleled ways. Narratives share much in common with readers' everyday experiences: both involve characters, settings in time and place, the passage of time, and actions and their consequences. These types of texts entertain readers and play on a wide spectrum of their emotions. Narratives also appear to engage readers cognitively in different ways than other genres. The cohesiveness and familiarity inherent to the narrative genre provide cues that facilitate the mental construction of text meaning, the retrieval of related knowledge from memory, and the integration of this knowledge into the representation of the text's meaning. L1 studies have provided a wealth of evidence supporting the facilitating role of the narrative genre in reading comprehension. However, these results have not yet been replicated in L2 settings, where the few studies examining narrative and expository text comprehension have obtained conflicting results. The lack of consistency in results as well as methodology in these studies justifies further investigation of the relationship between text genre and L2 reading comprehension. Furthermore, it is important to examine this relationship among a cross-section of L2 learners, as there is some evidence of the existence of a language proficiency threshold below which readers may not effectively take advantage of genre cues.

2.3 Conclusion

Research has identified an array of linguistic and non-linguistic individual differences that contribute to reading comprehension in another language. A wide range of studies has established that individual differences in target language proficiency and native language reading ability have direct and robust effects on L2 reading comprehension. Metacognitive knowledge, or knowledge about reading and texts, appears to contribute to both L1 and L2 reading skills, making it a necessary component of any model seeking to explain L2 reading comprehension variance. Individual differences in exposure to both written and oral language also make significant contributions to L2 reading, as well as to the development of other language skills.

An abundance of research has reported significant relationships between non-linguistic variables, including motivation and anxiety, and L2 learning. However, direct predictive effects of these affective variables on L2 reading comprehension have not been convincingly demonstrated. Instead, it is likely that motivation and anxiety affect reading outcomes by shaping behaviors, for example, by encouraging or discouraging learners to read in the target language or to engage in other activities that put them in contact with the L2.

Since reading involves an interaction between reader and text, however, it is not sufficient to examine only these reader-based differences. Text-based factors such as genre also make important contributions to the reading process. Research in native language contexts has conclusively established that narrative, story-based texts are more easily comprehended than expository, informational texts. However, these results have yet to be convincingly reproduced in L2 settings. Though some research suggests that

genre-level cues that may facilitate comprehension are only accessible to learners at higher proficiency levels, the question of the interaction of genre and learner level in L2 reading comprehension also remains open.

CHAPTER 3: METHODOLOGY

The methodology for the experimental study to be described in this chapter was adapted from methods used in a pilot study conducted at Michigan State University in Spring 2006. I will therefore begin with a discussion of the pilot study's methodology, its results and their implications for the main experimental study. This will be followed by a description of the methodology used in the present study.

3.1 The pilot study

3.1.1 Experimental design

The pilot study examined the effects of text genre and motivation for L2 study on reading comprehension in French. Intermediate-level French students completed self-report questionnaires assessing their motivations for learning French. Participants read two narrative and two expository tests and performed free written recalls in English of everything they remembered from each text. The experiment used a repeated measures design; all research participants read the same texts and performed the same recall tasks for each passage. Written recalls were scored based on a propositional analysis of each text.

3.1.2 Research questions

The pilot study was limited to investigating the relationships between text genre and individual differences in motivation for language study. Questionnaires and tests measuring other individual differences, including L2 proficiency and L2 print exposure, were also piloted in this study. However, statistical analyses were limited to answering the following research questions:

1) Does text genre affect L2 (French) reading comprehension? From which genre do students comprehend more?

2) Does motivation for language learning affect L2 reading comprehension? If so, which motivational orientations (intrinsic, extrinsic, amotivation) contribute most?

3) Are effects of text genre moderated by motivational orientations?

3.1.3 Hypotheses

The hypothesized answers to these research questions were:

1) In light of consistent supporting evidence from L1 reading research (discussed in section 2.2.2), it was expected that text genre would have a significant main effect on recall comprehension, and that participants would recall significantly more from narratives than from expository texts.

2) It was expected that all motivational orientations (intrinsic, extrinsic, amotivation), would affect reading comprehension, but that intrinsic motivation would contribute most. L1 reading research has found relationships between both intrinsic and extrinsic orientations and reading outcomes, with some research suggesting that intrinsic motivation is a stronger predictor (Gottfried, 1990). L2 research has provided additional evidence that intrinsic motivation predicts reading comprehension (Brantmeier, 2005). Correlational research also indicates that negative relationships between amotivation and L2 reading comprehension exist (Kondo-Brown, 2006).

3) No significant interactions between motivational orientations and text genre were expected given the absence of research demonstrating that relationships exist between learner motivations and comprehension of particular types of texts.

3.1.4 Method

3.1.4.1 Participants

Fifty-seven adult learners of French were recruited from intermediate (third and fourth semester) university French classes. The sample included 43 females and 14 males ranging in age from 18-59 years ($M = 20.6$). Participants received 15 points extra credit for participating in all study sessions. All participants were native English speakers.

3.1.4.2 Materials

The reading passages used in the pilot study included two narrative literary texts and two expository informational texts. All passages were excerpted from longer passages found in contemporary (published within the previous 10 years) intermediate-level university textbooks or readers. The texts and their English translations are found in Appendix A.

Narrative Text 1, *Les trois motocyclistes* (*The Three Motorcyclists*), a short story by Marie Cardinal, is a recollection of a camping trip where the author and her companions befriended three American bikers. Narrative Text 2, *L'œuf de Pâques* (*The Easter Egg*) from a short story by Henri Crespi, describes the role of an Easter tradition in the evolution of a couple's relationship. Expository Text 1, *Le café dans la vie des étudiants* (*The Café in Student Life*) from La condition étudiante by Catherine Vallabrègue discusses the importance of cafés to French university students' social development. Expository Text 2, *La vague bouddhiste* (*The Buddhist Wave*) is an excerpt from an article from the magazine L'Express about the increasing popularity of Buddhism in France.

These reading passages were taken from contemporary intermediate-level textbooks in order to approximate materials that students would be likely to encounter in their French studies. These texts appeared to be "authentic" using Young's (1999) definition that authentic materials are unsimplified and are written for a native L2 population. The fact that the passages contained glosses and notes explaining lexical and grammatical items (which were not included in the versions of the texts used in the study) suggested that the texts had not been simplified, and their attribution to French publications or authors other than the textbook author was taken as evidence that they were written for a French-speaking audience. The majority of texts contained in the intermediate-level textbooks and readers that were reviewed also appeared to be authentic. Empirical evidence that learners at all levels of instruction are capable of comprehending authentic texts exists. Allen, Bernhardt, Berry, and Demel's (1988) cross-sectional study of high-school learners, for example, showed that even first-year students of French, Spanish and German were capable of comprehending different types of authentic expository texts. DuBravac and Dalle (2002) found that more advanced (fourth-semester) French students could comprehend both authentic narrative and expository texts. Young (1999), in fact, showed that intermediate students of Spanish actually comprehended more from authentic texts of both genres than from texts whose vocabulary and grammar had been simplified. Because they seemed representative of reading materials used in the L2 classroom and because they are comprehensible for learners from the beginning level forward, authentic texts were therefore judged appropriate for use in the present study.

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Efforts were made to select texts comparable in length (261-287 words) and in lexical and syntactic complexity. Some differences in syntactic features existed between texts, as it was not possible to find authentic texts with exact correspondences between all structural and grammatical characteristics without manipulation that would have rendered them less than authentic. The expository texts, for example, tended to contain more words per sentence, whereas the narrative texts contained more object pronouns and reflexive constructions. An analysis of lexical and grammatical features of the texts is presented in Table 1.

Table 1

Text characteristics, pilot study

	Narrative			Expository		
	N1	N2	*M*	E1	E2	*M*
Number of words	287	261	274	269	261	265
1K words [a]	.77	.84	.81	.81	.74	.78
Function	.51	.54	.53	.51	.49	.50
Content	.24	.28	.26	.31	.25	.28
2K words [b]	.06	.02	.04	.10	.08	.09
3K [c]	.01	.01	.01	.02	.04	.03
Words not on list	.15	.14	.15	.07	.15	.11
Words per sentence	9.6	13.2	11.4	12.6	16.6	14.6
Object pronouns	2	3	2.5	0	0	0
Reflexive verbs	4	8	6	2	3	2.5
Relative pronouns	6	5	5.5	8	1	4.5
Semantic propositions [d]	94	82	88	84	92	88

Note. N1:*The Three Motorcyclists*, N2: *The Easter Egg*, E1: *The Café in Student Life*, E2: *The Buddhist Wave.* [a] Words appearing on the Lexical Frequency Profile's (Goodfellow, Jones & Lamy, 2002) list of the one thousand most frequently occurring words in French; analysis performed using *Web VP en français* (Cobb, 2006). [b] Words 1001-2000. [c] Words 2001-3000. [d] Listed in Appendix B.

Because topic familiarity may affect reading comprehension (Allen et al., 1998; Barry & Lazarte, 1998; Carrell, 1987; Chen & Donin, 1997), texts dealing with topics that are likely somewhat familiar to intermediate French students were chosen (camping, hiding Easter eggs, French student life, religion in France). These texts were also selected because they contained few unfamiliar culture-specific references that might impede

comprehension. Participants' actual familiarity with the text topics was assessed using a questionnaire administered after the reading and recall tasks were completed.

3.1.4.3 Measures

3.1.4.3.1 Predictor variables.

3.1.4.3.1.1 Text genre.

Participants read two texts representing each of the genres under investigation: narrative (*The Three Motorcyclists, The Easter Egg*) and expository (*The Café in Student Life, The Buddhist Wave*).

3.1.4.3.1.2 Motivation for French study.

Participants completed a 28-item questionnaire to assess their motivations for studying French. The questionnaire was adapted from Vallerand, Pelletier, Blais, Brière, Senécal, and Vallières' (1992) Academic Motivation Scale/College Version (AMS), an English version of an instrument originally used in motivation studies among French-speaking college students (Vallerand, Blais, Brière, & Pelletier, 1989). When tested with English L1 college students ($n = 217$), the AMS had satisfactory reliability (mean Cronbach's alpha score for the intrinsic, extrinsic and amotivation subscales = .81) and stability of scores over a one-month period (mean test-retest correlation = .79) (Vallerand, Pelletier, Blais, Brière, Senécal, & Vallières, 1993). An adapted version of the questionnaire has also been used to assess motivation of college students to study another language. Noels, et al. (2000) reported the same internal reliability (mean α = .81) when the questionnaire was used to measure English L1 students' motivation to study French.

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In this pilot study, questions referring to college in general (e.g., "Because I think a college education will help me better prepare for the career I have chosen") were modified similarly to Noels at al. (2000) to refer specifically to language study (e.g., "Because I think studying French will help me better prepare for the career I have chosen"). The questionnaire included 12 items each assessing intrinsic motivation (e.g., "Because I experience pleasure and satisfaction while learning new things") and extrinsic motivation (e.g., "Because studying French will help me get a high-paying job"), and four items measuring amotivation (e.g., "Honestly, I don't know; I really feel I am wasting my time studying French"). Students were asked to rate each item on a 7-point Likert scale, where a response of 1 indicated that the item did not correspond at all for their reasons for studying French and a response of 7 indicated it corresponded exactly. A copy of the questionnaire is found in Appendix C.

3.1.4.3.2 Outcome variable

Reading comprehension was assessed using free written recalls. After reading each text, participants wrote everything that they remembered about the text in English without looking back at it. According to Koda (2005), "[t]here is general agreement that free recall is the most straightforward procedure for assessing the outcome of reader-text interaction" (p. 236). This method is widely accepted in L2 reading research for several reasons. Most importantly, recalling information from a text does not influence the reader's understanding of it. Other measures of comprehension, such as multiple-choice or short-answer tests, may provide readers with cues about text meaning, prompting them to make interpretations based on the question's content instead of their own understanding of the text. When used to assess comprehension of short passages such as

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the ones used in this study, it may also be difficult to construct a sufficient number of

questions per passage to observe variability that achieves statistical significance.

Illustrations of this difficulty can be found in some recent L2 reading studies, where

significant effects of individual reader differences on recall comprehension scores were

noted but a lack of variance in multiple-choice test scores prevented duplication of these

results with this measure (Brantmeier, 2005; Fecteau, 1999).

Participants were asked to complete the recalls in English instead of French in

order to avoid any L2 proficiency effects on the recall task. Lee (1986a) found that

English L1-Spanish L2 students at four different semester levels recalled significantly

more when they wrote recalls in English instead of Spanish. He concluded that

"reproducing a passage in the target language imposes a ceiling due to the learners'

limited L2 production abilities; when learners are tested in their own language, this

ceiling disappears" (Lee, 1986, p. 185).

Each text was translated into English and broken down into propositions using a

system of propositional analysis adapted from Kintsch (1998). The propositional

breakdowns of the texts are found in Appendix B. Propositions consist of a predicate (a

verb, adverb, conjunction or other relational term) and its argument(s). The following

excerpt from Narrative Text 1 (*The Three Motorcyclists*) will be used to illustrate

propositional analysis:

Original French text: *Grégoire a pris son banjo.*

English translation: *Gregory picked up his banjo.*

In this example, *Gregory* and *banjo* are arguments of the predicate *picked up*. The content

of this proposition is represented in the analysis as follows:

pick up [Gregory, banjo]

This type of propositional analysis represents the textbase, or the underlying semantic content of the text, instead of the text's surface form. Chen and Donin (1997) and Pulido (2004) note that propositional analysis' validity as an assessment tool is well-documented; it receives more support in relevant psychological literature than multiple-choice tests, idea units, or methods assessing understanding of a text's surface structure.

Participants' written recalls were scored based on the number of propositions that were recalled using a system adopted from Pulido (2004). Propositions containing a verb as their relational term were worth two points. Those containing an adverb, conjunction or other relational term were worth one point. Full credit was awarded for recalling the entire proposition (e.g., predicate and all arguments), half credit for recalling part of the proposition (e.g., predicate and/or some of the arguments), and no points were awarded if no part of the proposition was mentioned. Because the texts were translated from French to English in order to score recalls that participants would write in English, several possible translations of words from the text were often possible. All were accepted as full-credit responses. In the example cited above (*Grégoire a pris son banjo/Gregory picked up his banjo*), for instance, both *Grégoire* and *Gregory* were judged as acceptable, as were contextually-appropriate synonyms of the French verb *prendre* (originally translated as *pick up*), such as *get, get out*, or *take out*.

3.1.4.3.3 Pilot instruments.

Though not directly related to this study's research questions, the instruments described in this section were also piloted in the study.

3.1.4.3.3.1 Demographic questionnaire.

Participants completed a survey of demographic information including age, sex, and previous French study experiences. Students were also asked about their major, whether they were studying French to complete a degree requirement, whether they would be studying French without any degree requirements, and the highest level of French they intended to complete.

3.1.4.3.3.2 L2 proficiency test.

A 39-item pencil and paper test was created by adapting MSU's computerized French placement test[2]. Students who have previously taken French and who intend to continue their language studies at MSU are required to take the placement test, typically during freshman orientation, so that they may enroll in an appropriate level class. The placement test is geared towards beginning and intermediate learners; students who miss no more than one question are permitted to enroll in advanced level classes. This instrument includes items testing listening ($n = 6$) and reading ($n = 6$) skills as well as knowledge of grammar ($n = 12$) and vocabulary ($n = 15$). The listening and reading sections consist of one passage followed by multiple-choice comprehension questions. Grammar questions are also multiple-choice; each item asks students to choose the grammatically correct response to complete a sentence. Vocabulary knowledge is assessed by providing students with a description in French and asking them to choose the word that does not fit the description from a list of choices.

The pilot study proficiency test was constructed by selecting each of the 39 items from a pool of four possible questions that are randomly generated when students take the

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[2] Because permission to adapt and use this proprietary test was granted on the condition that it not be reprinted, a copy of the instrument is not provided here.

computerized version of the placement test. This random generation of items resulted in a low probability (one in four) that participants who had previously taken the MSU placement test would have encountered any of the particular items appearing on the pilot study version of the test. It was also considered unlikely that participants who had previously taken the placement test would have remembered individual items from it, as the most recent date that any normally would have completed the test was nine months prior to the pilot study. Moreover, it was expected that a significant proportion of these intermediate-level participants had begun their college French study at the beginning level, so that they would have taken the placement test at an even earlier date if at all.

3.1.4.3.3.3 Reading activity questionnaire.

Exposure to French in print was assessed using an 18-question survey adapted from Guthrie, McGough and Wigfield's (1994) Reading Activity Inventory, a measure of reading amount first used in L1 studies of elementary school students. Survey questions were changed to ask about reading in French instead of L1 reading. The questionnaire was divided into sections on reading for school and reading for pleasure. Students were asked to report whether they had read certain types of French texts in the past week, including French textbooks, literature or fiction, non-fiction, magazines, newspapers, and online materials, and if so to identify the materials read. They were also asked how often they read particular types of texts (almost every day, about once a week, about once a month, or almost never) and for how many hours per day, week or month they typically read these materials. This questionnaire is reproduced in Appendix D.

3.1.4.3.3.4 Familiarity questionnaire.

Students were asked how familiar they had been with the topics of each of the four reading passages before they had read them. They provided ratings on a 7-point Likert scale where a response of 1 indicated the topic was not at all familiar and 7 indicated it was completely familiar. Students were also asked to rate the familiarity of the two text genres that were the focus of this study (short stories and informational texts). Items asking for familiarity ratings of other topics and genres were also included to gather information for possible future research. The questionnaire is presented in Appendix E.

3.1.4.3.3.5 Text reactions questionnaire.

Further information about participants' experiences reading each of the four texts was collected using a survey including both quantitative and qualitative items. First, students were asked to rate the difficulty and their enjoyment of the four texts using a 7-point Likert scale. Next, participants were asked to provide comments explaining their difficulty and enjoyment ratings. This post-reading survey is found in Appendix F.

3.1.5 Procedure

Data was gathered in two sessions conducted one week apart. In the first session participants completed the demographic, Motivation for French Study, and Reading Activity in French questionnaires, and the French proficiency test. During the second session participants read the two narrative and two expository texts and completed free written recalls in English. A repeated measures design was used; all participants read the same four passages. In order to control for text presentation order effects, the texts were counterbalanced. Eight different versions of the reading booklet were distributed where

each text was presented first, second, third or fourth in two of the versions. In each version the location of each text in relation to the others was also varied.

After reading each text, participants were instructed to write in English everything they remembered about each text in as much detail as they remembered. No time limit was placed on either the reading or recall tasks. Because the recall task was intended to elicit the representation of text meaning that readers had processed and stored in long-term memory, not information that remained in working memory after reading, participants completed a short math task between the reading and recall to clear working memory. Five simple math problems whose answers were numbers from 1-20 were written in digits, and participants were asked to write the answer to each problem out in French words (e.g., "2 + 3 = *cinq*"). Finally, after finishing the four written recalls, participants completed the Familiarity and Text Reactions questionnaires. After all participants had completed both experimental sessions, they were informed of the study's purpose via electronic mail.

3.1.6 Scoring

3.1.6.1 Motivation

Overall motivation to study French was calculated by tabulating a score for the 28 7-point questions on the Motivation for French Study questionnaire. Because questions assessing amotivation were negatively worded (e.g., "Honestly, I don't know; I really feel I am wasting my time studying French"), scores for these items were reversed for the purposes of calculating the global motivation score. For example, a score of 7, indicating complete agreement with an item describing amotivation, was converted to a score of 1, which would reflect complete disagreement with items reflecting a positive form of

motivation. Scores were also compiled for the three motivational orientations under investigation from the items identified by Vallerand et al. (1992) that assessed each of these constructs.

3.1.6.2 Reading comprehension

Participants' comprehension scores were computed for each text by calculating the percentage of propositions recalled. In order to examine variance in comprehension scores by genre, a collapsed mean score was calculated for the two narrative texts and the two expository texts.

3.1.7 Results

3.1.7.1 Descriptive statistics

3.1.7.1.1 Motivation.

Before tabulating descriptive statistics for motivation, Cronbach's alpha, a coefficient of reliability, was computed to test the internal consistency of the motivation questionnaire. Cronbach's alpha measures how well a set of items measures an underlying construct by calculating average intercorrelations between items as a function of the number of items. According to Nunnally (1978), Cronbach's alpha levels of .70 or higher are acceptable for research instruments. Internal consistency of the motivation questionnaire was quite high overall (α = .97), as was consistency of items in the intrinsic (α = .95), extrinsic (α = .95) and amotivation (α =.82) subscales. These values indicate that the instrument was a reliable measure of motivation and its three component orientations.

Descriptive statistics for motivation are displayed in Table 2.

Table 2

Descriptive statistics and correlations for motivation, pilot study

	$M^{a,b}$	SD	1	2	3
Overall motivation	3.84	1.25	(.97)		
1. Intrinsic motivation	3.56	1.08	(.95)		
2. Extrinsic motivation	3.36	1.00	.84	(.95)	
3. Amotivation	1.87	1.00	-.62	-.52	(.82)

Note. Values in parentheses are estimates of internal consistency (Cronbach's α).
[a] Minimum possible = 1 (reason does not correspond at all); maximum possible = 7
(reason corresponds exactly). [b] n = 57.

The mean score for overall motivation (3.84) was just slightly above the midpoint

on the 7-point Likert scale, indicating that on the whole participants were moderately

motivated to study French. Means for intrinsic (3.56) and extrinsic (3.36) orientations

were quite similar to each other. Scores for amotivation were considerably lower than the

other motivation scores. The average amotivation response ($M = 1.87$) indicated that

items describing amotivation corresponded little if at all to participants' reasons for

studying French. A frequency analysis of questionnaire items also revealed that

amotivation items elicited stronger disagreement than did items in the intrinsic or

extrinsic subscales. 65% of participants responded that amotivation reasons did not

correspond at all to their reasons for L2 study. This contrasted with approximately 20%

of respondents who reported that intrinsic and extrinsic orientations did not reflect their

reasons for language study.

3.1.7.1.2 Reading comprehension.

Descriptive statistics for reading comprehension are found in Table 3.

Table 3

Descriptive statistics for reading comprehension, pilot study (propositions recalled)

	M [a]	SD	min	max
Narrative				
N1	.18	.10	.04	.49
N2	.19	.11	.01	.49
Both narrative	.19	.10	.03	.49
Expository				
E1	.09	.04	.02	.18
E2	.17	.10	.02	.47
Both expository	.13	.06	.02	.33
All texts	.16	.08	.03	.41

Note. N1:*The Three Motorcyclists*, N2: *The Easter Egg*, E1: *The Café in Student Life*, E2: *The Buddhist Wave.* [a] n = 57.

Overall, participants recalled 16% of all propositions from the texts. Collapsed means show superior recall for narratives (19%) over expository texts (13%). Participants also comprehended more from each narrative passage than from either of the expository texts. Nearly identical percentages of propositions were recalled from both narrative passages (18-19%); however, participants recalled nearly twice the percentage of propositions from Expository Text 2 (17%) than from Expository Text 1 (9%).

3.1.7.2 Data analysis

   3.1.7.2.1 Research Question 1: Text genre and L2 reading comprehension.

   Research Question 1 asked whether participants would comprehend more from

narrative or expository texts, and if text genre affects L2 reading comprehension. It was

hypothesized that significantly more would be recalled from the narrative texts, and that

genre would have a significant main effect on L2 reading comprehension.

   Collapsed means reported in Table 3 showed that participants did in fact

comprehend more from the narrative passages. To determine whether this difference was

statistically significant, a paired sample t-test was conducted. The t-test is used to identify

statistically significant differences between means. Results confirmed that participants

recalled significantly more from the narrative passages [t = 6.778, df = 56, p = .000].

   The effect of text genre on reading comprehension was assessed using repeated

measures factorial ANOVA. This test measures the statistical significance of

relationships between more than one categorical predictor variable and one continuous

outcome variable, and is used in experimental designs where all subjects perform the

same tasks (in contrast to experiments where different groups of participants perform

different tasks or receive different experimental treatments). A 2 x 2 ANOVA was

conducted with genre and text as fixed factors, each with two levels. For genre these

levels were narrative and expository; within these genres the two levels were Text 1 and

Text 2. ANOVA results are presented in Table 4. In this analysis, both genre [F = (1, 56)

= 46.38, p = .000] and text [F = (1, 56) = 22.82, p = .000] had significant main effects on

reading comprehension. In other words, significant differences in reading performance

existed depending on the genre and also on the text read. The size of genre's effect on

reading comprehension as determined by its Pearson's product-moment correlation coefficient (r) was quite large[3] ($r = .67$). The effect of text on reading comprehension was smaller than that of genre, but still quite large ($r = .54$). However, a significant interaction between genre and text was also found [$F = (1, 56) = 15.52, p = .000$], confirming that comprehension scores for Expository Text 1 and Expository Text 2 were significantly different. This effect size was moderately large ($r = .47$).

Table 4

Analysis of variance for effect of genre and text on reading comprehension, pilot study

Source	*df*	SS	MS	F	*p*
Genre	1	.17	.17	46.38	.00
Text	1	.10	.10	22.82	.00
Genre x Text	1	.08	.08	15.52	.00
Error	56	.30	.01		

3.1.7.2.2 Research Questions 2 and 3: Motivation and L2 reading comprehension.

Research Questions 2 and 3 asked about the relationship of motivational orientations to reading comprehension as well as to differences in reading comprehension by genre. More specifically, Research Question 2 asked if motivation for language learning affects L2 reading comprehension, and if so, which motivational orientations have the greatest effect. It was expected that all motivational orientations would affect L2 reading comprehension, with intrinsic motivation making the greatest contribution. Research Question 3 asked whether motivational orientations moderated the effects of genre on reading comprehension, or in other words, whether reading comprehension

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[3] Cohen (1992) proposes that r values of .10, .30 and .50 represent small, moderate, and large effect sizes, respectively.

scores for either genre varied according to the reader's levels of intrinsic motivation, extrinsic motivation or amotivation. No significant interactions between motivational orientations and text genre were expected.

Another iteration of the factorial ANOVA described in section 3.1.7.2.2 was performed to answer these questions. This test was identical in design to the previously described ANOVA (2 x 2 with genre and text as fixed factors), however, it added intrinsic motivation, extrinsic motivation and amotivation as covariates in the proposed model. This test therefore would account for effects of these motivational orientations on reading comprehension and would identify any interactions between motivational orientations and genre or text. The results of the analysis are presented in Table 5. None of the motivational orientations had significant effects on reading comprehension, and no significant interactions between motivation and genre or motivation and text were present. However, in contrast to the first analysis of variance that found significant main effects for genre and text, in the analysis that controlled for motivational orientations these effects became non-significant [genre $F = (1, 53) = 2.80, p = .10$; text $F = (1, 53) = .33, p = .57$]. The interaction between genre and text, however, remained significant [$F = (1, 53) 4.75, p = .03$].

Table 5

Analysis of variance for effect of genre and text on reading comprehension with motivational orientations as covariates, pilot study

Source	*df*	SS	MS	F	*p*
Genre	1	.01	.01	2.80	.10
Genre x Intrinsic	1	.00	.00	.30	.58
Genre x Extrinsic	1	.00	.00	.24	.62
Genre x Amotivation	1	.00	.00	.24	.63
Text	1	.00	.00	.33	.57
Text x Intrinsic	1	.00	.00	.28	.60
Text x Extrinsic	1	.00	.00	.03	.87
Text x Amotivation	1	.00	.00	.04	.84
Genre x Text	1	.03	.03	4.75	.03
Genre x Text x Intrinsic	1	.00	.00	.57	.45
Genre x Text x Extrinsic	1	.02	.02	.29	.10
Genre x Text x Amotivation	1	.01	.01	2.73	.11
Error	53	.28	.015		

3.1.7.3 Pilot instruments

Although not directly related to the pilot study research questions, the following instruments were also tested for possible use or adaptation in the planned follow-up study.

3.1.7.3.1 L2 proficiency test.

Descriptive statistics of the proficiency test scores are summarized in Table 6. Internal consistency of the 39 test items (α = .65) indicated that the instrument was a reasonably reliable measure of French proficiency. The mean proficiency test score was 60%, with scores ranging between 33% and 87%. Participants scored highest on average on the listening section (81%). Vocabulary and reading scores were quite similar, averaging 64% and 61% respectively. Performance was weaker on the grammar section, with a mean score of 45%. With the exception of this grammar section, ceiling effects were observed in all sections of the test. Frequency analyses showed that nearly 40% (n = 22) of participants attained perfect scores on the listening section, 7% (n = 4) scored 100% on the reading section, and one of the 57 participants scored perfectly on the vocabulary section. A floor effect was also observed in the reading section, where two of 57 participants answered all questions incorrectly.

Table 6

Descriptive statistics and correlations for French proficiency, pilot study

	M [a]	SD	1	2	3	4
Total score	.60	.12	(.65)			
1. Listening	.81	.19	(.37)			
2. Vocabulary	.64	.17	.19	(.47)		
3. Reading	.61	.24	.14	.26	(.55)	
4. Grammar	.45	.17	.24	.38*	.13	(.29)

Note. Values in parentheses are estimates of internal consistency (Cronbach's α). Mean values reflect proportion correct. Correlations marked with an asterisk (*) are statistically significant at the .01 level. [a] *n = 57*.

3.1.7.3.2 Reading activity questionnaire.

This 18-item survey asked participants to report the amount that they read in French for both academic purposes and for pleasure. Because the questionnaire allowed students to indicate the number of hours per day, week or month they read each type of material, reported hours were converted to hours per week by dividing hours per month by 4 or multiplying hours per day by 7 (e.g., 2 hours per month was converted to .5 hours per week; 1 hour per day was converted to 7 hours per week). Reading activity results are displayed in Table 7. On average, students reported reading 5.75 hours per week in French. The preponderance of this reading (5.15 hours, or 90%) was for school. Just under 70% of this academic reading was from textbooks. An additional 14% was reading nonfiction books, and about 17% was reading newspapers, magazines or online materials. Reading literature or fiction accounted for less than 1% of all school-related reading. In contrast, students who read for pleasure reported spending 17% of their reading time reading fiction books and only 5% reading nonfiction books. Online reading constituted

the bulk (47%) of reported reading for pleasure. Magazines and newspapers accounted for an additional 13% of this pleasure reading time. Finally, students reported reading other materials for pleasure 18% of the time. Overall, however, students reported spending very little time – just over half an hour per week - reading materials unrelated to French class. A frequency analysis further showed that the majority of these intermediate-level students (67%) reported spending no time at all reading in French for their own interest or pleasure.

Table 7

Descriptive statistics for reading activity in French, pilot study (hours per week)

	M [a]	SD	min	max
Academic reading	5.15	5.74	.00	24.00
Textbook	3.53	2.81	.00	10.50
Other (magazine, newspaper, online)	.85	3.32	.00	21.00
Nonfiction book	.73	1.77	.00	7.00
Literature or fiction book	.04	.27	.00	2.00
Reading for pleasure	.60	1.81	.00	12.00
Online	.28	1.00	.00	7.00
Other	.11	.42	.00	3.00
Fiction book	.10	.51	.00	3.75
Magazine or newspaper	.08	.20	.00	1.00
Nonfiction book	.03	.10	.00	.50
Total reading	5.75	5.74	.00	24.00

[a] $n = 57$.

3.1.7.3.3 Familiarity questionnaire.

After reading and completing written recalls for all four reading passages, participants were asked to rate their pre-reading familiarity with the text topics on a 7-point Likert scale. Students were also asked to rate the familiarity of the two text genres that were the focus of this study, short stories (narratives) and informational (expository) texts. Familiarity results are reported in Table 8.

Participants reported similar levels of familiarity with both Narrative Text 1's (M = 2.00) and Narrative Text 2's (M = 2.18) topics. These 7-point scale ratings indicated that the narrative topics had not been very familiar to them before they read the texts. A

paired-sample t-test confirmed that the familiarity ratings for the two narrative texts were not significantly different (p = .000). Participants were more familiar with the expository text topics than with the narrative topics, differences that were statistically significant (N1-E1 p = 000; N1-E2 p = .001; N2-E1 p = .000, N2-E2 p = .02). Participants also reported being significantly more familiar with Expository Text 1's topic (cafés in French student life) than that of Expository Text 2 (Buddhism in France) (p = .01). The mean familiarity ratings for the expository texts (E1 M = 3.35; E2 M = 2.74) indicated that these topics had been a little familiar to participants before reading the texts.

Turning to genre familiarity, scores for the expository genres (M = 5.25) were slightly higher than those of the narrative genre (M = 4.96). However, this difference was not statistically significant, indicating that participants were equally familiar with both genres. The mean ratings for both genres combined (M = 5.11) indicated that the narrative and expository genres were both very familiar to them.

Table 8

Descriptive statistics for topic and genre familiarity, pilot study

	M [a]	SD	min	max
Topics				
N1: *The Three Motorcyclists*	2.00	1.51	1	6
N2: *The Easter Egg*	2.18	1.71	1	7
E1: *The Café in Student Life*	3.35	1.73	1	7
E2: *The Buddhist Wave*	2.74	1.48	1	6
Genres				
Narratives (short stories)	4.96	1.41	2	7
Expository (informational) texts	5.25	1.43	2	7

Note. Minimum possible score = 1 (not at all familiar), maximum = 7 (completely familiar). [a] n = 57.

3.1.7.3.4 Text reactions questionnaire.

A second post-reading questionnaire asked participants to rate the difficulty of the four reading passages as well as their level of enjoyment of each text. These ratings are reported in Table 9.

Collapsed results show that overall participants found the narrative texts more difficult (M = 3.80) than the expository texts (M = 3.22), a difference that was statistically significant (p = .004) as measured by paired-sample t-test. These ratings indicated that narrative texts were "somewhat difficult" and expository texts were "a little difficult". Mean difficulty scores by text showed no significant differences in difficulty ratings for the two narratives (p = .53) or the two expository texts (p = .06).

No significant differences existed between the reported enjoyment of narrative and expository texts (p = .09). Mean enjoyment responses (narrative M = 4.11; expository

$M = 4.43$) indicated that overall participants neither liked the texts representing both genres, though not intensely. Though there were no significant differences in enjoyment between the two narrative texts ($p = .20$), participants reported enjoying Expository Text 2 significantly more than Expository Text 1 ($p = .004$).

Table 9

Descriptive statistics for difficulty and enjoyment ratings, pilot study

	Difficulty [a]				Enjoyment [b]			
	M^b	*SD*	min	max	*M*	*SD*	min	max
Narrative texts	3.80	1.08	1	6	4.11	1.19	1.5	7
N1	3.72	1.31	1	6	3.95	1.33	1	7
N2	3.88	1.54	1	7	4.28	1.72	1	7
Expository texts	3.22	.94	1	5	4.43	1.02	2	6.5
E1	3.42	1.28	1	6	4.09	1.33	1	7
E2	3.02	1.17	1	6	4.77	1.34	2	7

Note. [a] Minimum possible = 1 (not at all difficult); maximum possible = 7 (extremely difficult). [b] Minimum possible = 1 (disliked completely); maximum possible = 7 (liked a lot). [c] $n = 57$.

Participants were also asked to provide comments explaining their difficulty and enjoyment ratings. Eight different categories were identified for these responses:

1) *Vocabulary.* The text's vocabulary was difficult or easy, known or unknown.

2) *Grammar.* Students knew or did not know the grammatical structures contained in the text.

3) *Comprehension:* Students' ratings were based on whether they understood or did not understand the text, without providing additional explanation of what made the text comprehensible or not.

4) *Complexity.* Students found the text simple or complex for reasons other than its lexical or grammatical content (e.g., "There was a lot of action and it didn't seem to flow together").

5) *Genre.* The text's genre was identified as the source of difficulty/ease or enjoyment/lack of enjoyment (e.g., "Easier because it was a story").

6) *Familiarity.* Students were or were not familiar with the text topic.

7) *Affect.* Ratings were based on a positive or negative affective reaction to the text ("I thought it was entertaining"; "The topic was not so interesting").

8) *Task.* A few students identified aspects of the experimental task as helpful or detrimental to their reading and text recall. Several of these comments had to do with the presentation order of the texts. For example, one participant noted that for the first text, "I didn't know what to expect so I didn't read carefully".

In many cases students provided more than one reason justifying their responses; all reasons were tallied. The number of comments in each category was tabulated per text, then by genre, and finally for all texts. Comments were also classified based on whether they reflected positively or negatively on students' perceptions of difficulty and enjoyment of the texts. For example, "I knew most of the words and could figure out meanings of unfamiliar words from the context of the sentence" was counted as a positive comment on difficulty in the vocabulary category, while, "[t]here were a variety of words I didn't know" was a negative comment. "I liked reading this text because I like...news

information articles" was considered a positive comment related to enjoyment in the genre category, while "...it was not in story form which made it very dull" was counted as a negative.

The results of these analyses of the comments are presented in Table 10. For both the narrative and expository texts, perceptions of difficulty were overwhelmingly attributed to text vocabulary. In contrast, only a few comments (less than 3%) connected grammatical knowledge to text difficulty. Overall, comments revealed that not knowing the relevant vocabulary made a text difficult more than knowing it made the text easier. A greater proportion of comments indicating vocabulary difficulty were recorded for the narrative (about 51%) than for the expository texts (35%). The next largest number of comments for all the texts (about 20%) expressed difficulty as a lack of comprehension without attributing the difficulty to any particular feature of the passage. Participants had differing perceptions of the roles of topic familiarity and genre in the difficulty of the narrative and expository genres. Only about 5% of comments mentioned topic familiarity in relation to difficulty for the narratives, while nearly 20% of difficulty comments for the expository texts indicated that topic familiarity played a role. However, all of the participants who mentioned genre in relation to difficulty for the narrative texts found that this genre facilitated comprehension (e.g., "It was easier than some others because it was a story") while the perception of the expository genre's effect on text difficulty was split between positive and negative.

Table 10

Text reaction comments, pilot study

Difficulty	Vocabulary		Grammar		Comprehen.		Complexity		Genre		Familiarity		Affect		Task	
	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−
N1 (total)	40		3		18		5		4		2		0		1	
N1 (+ / −)	10	30	1	2	5	13	2	3	4	0	1	1	0	0	0	1
N2 (total)	36		2		15		8		3		6		2		4	
N2 (+ / −)	10	26	0	2	9	6	2	6	3	0	2	4	2	0	0	4
Both (total)	76		5		33		13		7		8		2		5	
Both (+ / −)	20	56	1	4	14	19	4	9	7	0	3	5	2	0	0	5
E1 (total)	26		1		11		11		3		20		3		3	
E1 (+ / −)	5	21	0	1	6	5	3	8	1	2	18	2	0	3	0	3
E2 (total)	28		2		16		9		6		10		4		3	
E2 (+ / −)	7	21	0	2	10	6	4	5	4	2	7	3	2	2	2	1
Both (total)	54		3		27		20		9		30		7		6	
Both (+ / −)	12	42	0	3	16	11	7	13	5	4	25	5	2	5	2	4
All texts (total)	130		8		60		33		16		38		9		11	
All texts (+ / −)	32	98	1	7	30	30	11	22	12	4	28	10	4	5	2	9

Note: for each difficulty the first line gives the total per attribute; the second line gives the "+" and "−" breakdown.

Table 10 continued

Enjoyment	Vocabulary		Grammar		Comprehen.		Complexity		Genre		Familiarity		Affect		Task	
	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−
N1	1	3	0	0	7	22	1	0	10	1	0	0	18	8	0	1
N2	0	1	0	0	6	17	0	0	8	0	3	0	32	7	0	1
Both	1	4	0	0	13	39	1	0	18	1	3	0	50	15	0	2
E1	0	0	0	0	4	11	1	1	0	5	10	5	21	18	1	0
E2	3	3	0	0	7	6	0	0	5	2	5	2	32	9	0	0
Both	3	3	0	0	11	17	1	1	5	7	15	7	53	27	1	0
All texts	4	7	0	0	24	56	2	1	23	8	18	7	103	42	1	2

Comments explaining participants' enjoyment ratings, not surprisingly, centered on affective reactions to the texts. A greater percentage of affect-related comments were provided for the expository texts (53%) than the narratives (44%). Many more of the affective comments for the narratives passages, however, were positive (77%) than were comments on the expository texts (51%). Within the expository genre, Expository Text 2 inspired a greater proportion of positive affective comments (78%) than Expository Text 1 (54%). Differences were not as pronounced between the two narrative texts (69% and 82% for Texts 1 and 2, respectively). Turning to other, non-affective factors, 27% of comments mentioned comprehensibility as an important component of text enjoyment or lack thereof. About 10% implicated genre in enjoyment of the texts, with different patterns of genre's role emerging for the narrative and expository texts. All but one of the comments (95%) stated that the narrative genre played a positive role in text enjoyment, whereas more than 30% of comments for the expository texts indicated that the expository genre had negatively affected their enjoyment of the text. A large portion of these negative comments, however, were made in response to Expository Text 1; genre-related comments for Expository Text 2 were largely positive (71%). Nearly 90% of comments on topic familiarity's role in text enjoyment were made for the expository passages, and for these texts, comments reflected a mix of positive and negative familiarity effects on enjoyment of the texts. Interestingly, although some participants viewed familiarity as an aid to comprehension that therefore improved their enjoyment of the expository texts (or, similarly, reduced their enjoyment when they didn't know enough about the subject), several others found that too much familiarity with an expository text's topic made it less enjoyable to read (e.g.; "I liked this the least because

I've heard it all before"; "This was a bunch of information that I mostly knew"). In the few topic familiarity comments for the narrative texts, however, both familiarity and lack of familiarity were viewed as positive (e.g.; ("I liked this story the best because I was familiar with the Easter tradition"; "Cool, because I didn't know about this tradition"). In contrast with the comments on text difficulty, vocabulary knowledge was rarely mentioned as a factor in text enjoyment, and grammatical knowledge was not mentioned at all.

3.1.8 Discussion and implications for the present study

3.1.8.1 Text genre and motivation

The pilot study research questions asked about the relative comprehensibility of L2 narrative and expository texts, as well as the effects of text genre on L2 reading comprehension. They also inquired about the contributions of motivation and its component orientations to L2 reading comprehension and the interactions of motivational orientations with any text genre effects.

Results showing superior L2 reading comprehension for narrative texts provide some preliminary evidence confirming L1 findings that narratives are more comprehensible than expository texts, at least among intermediate learners. The interaction between genre and text present in both analyses of variance, however, calls for further consideration of these results. Though collapsed means revealed significant differences between comprehension of the two narratives and two expository texts, comparisons of means of individual texts showed that significant differences in comprehension existed only between the two narrative texts and Expository Text 1. Statistically, participants comprehended as much from Expository Text 2 as from both of

the narratives. This finding prompted a post hoc examination of this text, which revealed that it contained some narrative elements that appear to have aided comprehension. The passage, *The Buddhist Wave*, uses a description of the daily routine of one practitioner of Buddhist meditation to introduce information on the increasing popularity of Buddhism in France. This four-sentence portion of the text shares many of the characteristics of narrative texts identified by Graesser et al. (1991) and Larsen (1984) that may facilitate comprehension and recall: it introduces a character (François) and it recounts a sequence of events (he gets up, showers, dresses, and meditates) situated in a specific place and time (every morning in his Parisian apartment). Participants in fact recalled significantly more propositions in this narrative-like section (24%) than in the remainder of the text (13%). This analysis of Expository Text 2 seems to provide further evidence that narrative text structures aid comprehension in the L2. However, results on the relative comprehensibility of the two genres would have been more convincing absent the interaction between genre and text. It is expected that replacing Expository Text 2 in the main experimental study with a text that does not contain narrative-like elements will eliminate this interaction.

Factorial ANOVA results also suggest that when individual reader differences are accounted for, genre may play less of a role in L2 reading comprehension. Though a significant main effect for genre was found when genre and text were the only predictor variables included in an analysis of variance, genre's effect became non-significant when learners' motivational orientations were added. This suggests that reader-based affective differences may moderate text genre effects, and that contributions of individual differences to comprehension of each genre may be different. The effects of genre in

relation to individual reader differences, however, merits further investigation with a greater array of individual difference variables.

The lack of significant relationships between motivation for L2 study and reading outcomes suggests that motivation to study a language is not a proximate, determining factor in overall reading success or in success reading either genre. The absence of relationships between intrinsic motivation, extrinsic motivation or amotivation and L2 reading comprehension differs from findings of certain other reading studies. In L1 contexts, for example, relationships between both intrinsic and extrinsic motivation and reading comprehension have been observed (Gottfried, 1990; Guthrie et al., 1998; Guthrie et al., 1999). Some evidence of relationships between intrinsic motivation (Brantmeier, 2005) and amotivation (Kondo-Brown, 2006) and L2 reading also exists. One explanation for the difference between these results and those of the pilot study may relate to differences in the type of motivation that was measured. In contrast to this pilot study, the above-referenced research by and large has focused on motivation to read instead of general motivation to study a language. Though previous research has identified similarities in the components comprising motivation for L2 study and motivation for L2 reading (Kondo-Brown, 2006; Mori, 2002), there is also some evidence that motivation for L2 study and L2 reading are two distinct constructs (Mori, 2004). Learners may study a foreign language for reasons unrelated to those that motivate them to read (or not to read) in that language, and the latter might be better predictors of reading outcomes.

Participant comments also provided some qualitative evidence that the motivation questionnaire used in the pilot study did not tap the full range of reasons why students

study another language. One participant, who clearly did not find the reasons provided in the questionnaire adequate to describe her motivation for studying French, was prompted to write "[h]ow about I want to be able to communicate in France & I think its (*sic*) pretty" in the questionnaire margin. Because the questionnaire was adapted from an instrument originally used to assess general academic motivation and not motivation for language study, it in fact did not contain questions about these sorts of communicative and esthetic reasons that may induce students to study another language. Adding items to the questionnaire that measure such motivations may yield different results.

Though the analyses performed in the pilot study sought to find a direct relationship between motivation for L2 study and reading comprehension, it has been suggested that the relationship between motivation and language learning outcomes is indirect (Dörnyei & Kormos, 2000). It is therefore possible that motivation for language study moderates other variables that may in turn affect reading comprehension. Motivation may, for example, drive students to seek out opportunities to use or be immersed in the L2, to expend time and effort studying, or to use learning strategies to improve their performance. It will be important, therefore, to include variables such as language proficiency, language contact and metacognition in the statistical analyses of the main experimental study, and to use statistical analysis methods that allow any of motivation's possible indirect effects to be assessed.

3.1.8.2 L2 proficiency

Analyses of internal consistency showed that the French test used in the pilot study was reasonable reliable measure of French proficiency. However, ceiling effects observed in three of the four sections of the test confirmed that this instrument is not of

sufficient difficulty to test the language proficiency of students beyond the intermediate level. The difficulty of this test will therefore need to be increased when used with advanced learners in the present study.

3.1.8.3 Reading activity

Results of the reading activity questionnaire showed that the majority of students' target language reading is from textbooks and is related to their French coursework. About two-thirds of participants reported never reading in French for non-academic reasons, and those who do read for pleasure reported spending very little time doing so. These results underscore the importance of measuring other, non-print sources of L2 contact in the present study.

3.1.8.4 Topic and genre familiarity

Though participants reported being significantly more familiar with the expository text topics than those of the narrative texts, comprehension scores for the expository texts were lower. Thus, topic familiarity did not appear to predict reading comprehension in the pilot study. Topic familiarity is therefore not expected to be function as a predictor of reading comprehension in the present study. The lack of reported differences in students' familiarity with the two genres under investigation in this study also helps rule out any familiarity effects on comprehension scores for each genre.

3.1.8.5 Text reactions

Somewhat paradoxically, even though participants comprehended more overall from the narrative texts, they perceived these texts as more difficult than the expository passages. Yet students who mentioned genre in relation to text difficulty in their

comments all believed that the narrative genre facilitated comprehension. Instead, comments attributed difficulty largely to the vocabulary contained in the texts. The perception of narratives as more difficult than the expository texts might be further explained by students' minimal exposure to narratives relative to expository texts. Responses on the Reading Activity questionnaire indicated that less than 1% of the time students devoted to reading for school was spent reading literary texts. When reading for pleasure, students also reported reading narratives only about 16% of the time. Students' perceptions of difficulty of the narrative texts read in the pilot study, then, might be attributed in part to their lack of experience with narratives in the target language. These experiential effects on students' perceptions of each genre are expected to be replicated in the present study.

No significant differences were reported in students' enjoyment of the narrative and expository texts, though their enjoyment responses were rather neutral. Student comments, however, indicated more positive affective responses to the narrative texts than the expository texts, a result that is also expected in the present study.

3.2 The present study

3.2.1 Experimental design

The present study sought to expand upon the pilot study by examining the effects of text genre and of a wider range of individual difference variables on reading comprehension in French. It investigated these effects among a cross-section of learners at three different levels of French study (beginning, intermediate and advanced). A design similar to the pilot study was used. Participants completed questionnaires and other

measures of the individual difference variables under investigation (L2 proficiency, L1 reading ability, metacognition, L2 exposure, motivation and anxiety), then read two narrative and two expository tests and performed free written recalls in English of everything they remembered from each text. As in the pilot study, a repeated measures design was used in which all participants read the same texts and completed the same recall tasks. Participants' written recalls were again scored based on propositional analyses of the texts.

3.2.2 Research questions

The research questions in the present study deal primarily with the contributions of individual differences and text genre to reading comprehension in French. These questions are presented in detail below:

1a) What are the contributions of readers' L2 proficiency, L1 reading ability, metacognitive knowledge, L2 exposure, motivation and anxiety to L2 reading comprehension?

1b) What are the relationships between these individual differences in a model of L2 reading comprehension?

2a) Is there a difference in L2 reading comprehension due to text genre (narrative and expository)?

2b) Are there differences in comprehension of each genre by learner level (beginning, intermediate, advanced)?

2c) Are there differences in the contributions of individual difference variables to comprehension of each genre?

3a) What are learners' affective reactions to reading each genre in the L2? Do they prefer reading narrative or expository texts in the L2? Are there differences in these reactions by learner level?

3b) What are learners' affective reactions to reading the texts in this study? Do these reactions differ by genre, or only by text?

3.2.3 Hypotheses

The following hypotheses are proposed in response to the research questions:

1a) Consistent with numerous studies demonstrating substantial contributions of L1 reading ability and L2 knowledge to L2 reading comprehension (Bernhardt & Kamil, 1995; Bossers, 1991; Brisbois, 1995; Carrell, 1991; Gelderen et al., 2004; Lee & Schallert, 1997), it is expected that both of these variables will also make direct contributions in the present study.

1b) The following indirect effects of individual difference variables are expected:

i) Metacognition is hypothesized to have an indirect effect on L2 reading comprehension by contributing to L1 reading ability. Though relationships between metacognitive knowledge and L2 reading comprehension have been observed in some research (Schoonen et al., 1998), Gelderen et al.'s 2004 study provided evidence that metacognition's contribution is moderated by L1 reading ability when both of these variables are taken into account.

ii) Given the large corpus of research showing positive relationships between exposure to the target language and development of L2 knowledge and skills (see discussion in section 2.1.2.1), it is expected that L2 exposure will contribute to L2 proficiency.

iii) Consistent with Dörnyei and Kormos' (2000) observations, it is hypothesized that motivation will make an indirect contribution to L2 reading comprehension. Motivation is expected to contribute directly to students' L2 exposure and in turn to their L2 proficiency. Motivation is also expected to contribute to L2 study habits, a measure of motivational intensity (Mori, 2004).

iv) Students' L2 study habits are expected to contribute indirectly to reading comprehension through positive effects on L2 proficiency.

v) Anxiety is expected to have indirect negative effects on L2 reading by inhibiting L2 exposure and L2 proficiency.

2a) Based on results from L1 text genre research as well as from the pilot study, it is expected that students will comprehend significantly more from the narrative passages than from the expository texts.

2b) Learners at all levels of French instruction are expected to comprehend more from the narratives than from the expository texts. However, given research suggestive of a linguistic threshold for effects of global-level text features such as genre (Chen & Donin, 1997; Horiba, 1990), differences in comprehension of the two genres are expected to be greater among advanced learners than either intermediate or beginning learners, and greater among intermediate level learners than beginners.

2c) In light of L1 evidence of narrative text structures' facilitative role in reading comprehension, it is expected that the contributions of L1 reading ability and L2 proficiency to narrative text comprehension will be less than their contributions to expository text comprehension. In other words, language-related knowledge and skills will be less important in narrative than in expository comprehension.

3a) Given that one of the primary purposes of narrative texts is to engage readers affectively, it is expected that participants of all levels will have greater positive intrinsic affective reactions (enjoyment, interest) to reading narratives than to expository texts in the L2, and will express a preference for reading narratives over expository texts. In light of expository texts' primarily instructive purpose, it is expected that learners will believe that expository texts have a greater extrinsic utility value than narratives. Because students enrolled in upper-level French classes likely have more experience reading in general in the L2 and reading narrative L2 texts in particular, however, it is expected that advanced students will report significantly greater more positive affective reactions (enjoyment, utility, comprehensibility) and less anxiety related to both genres than intermediate and beginning-level students, and that these differences will be more pronounced for the narrative than the expository genre.

3b) It is also expected that students will report greater levels of intrinsic interest in and enjoyment of the narrative texts they read in the study for similar reasons as those described above; narrative texts are written with the intention of engaging readers affectively. Though students reported enjoying the narrative texts more in the pilot study, these results were not statistically significant. In the present study, it is expected that the larger and more diverse sample and a change in the scale of questionnaire items from 7 to 6 points (intended to eliminate neutral responses) will result in significantly greater levels of reported interest in and enjoyment of the narrative texts. Students are also expected to find the narrative texts more comprehensible and less anxiety provoking because of the positive affective reactions they inspire. In contrast, given the informative, utilitarian nature of expository texts, it is expected that students will place a greater extrinsic utility

value on the expository passages. However, in light of the varied reactions to each text reported in the pilot study, it is expected that reactions will vary not only by genre, but also by text.

3.2.4 Method

3.2.4.1 Participants

153 adult learners of French were recruited from beginning ($n = 26$), intermediate ($n = 91$) and advanced ($n = 36$) undergraduate French classes at Michigan State University in Spring 2007. The sample was comprised of 111 females and 42 males ranging from 18-28 years old ($M = 20.0$). All participants were native English speakers. Since many of the same materials had been used in the pilot study and its participants had been informed of the study's purpose upon its completion, students who had participated in the pilot were not permitted to participate in this experiment. Beginning and intermediate-level students and the majority of the advanced-level students received extra credit equivalent to approximately 1% of their final grade for participating in the study. Ten advanced-level students who were enrolled in courses in which extra credit was not offered were paid $15 for their participation.

A summary of participants' background characteristics as obtained from the demographic questionnaire (described in more detail in section 3.2.4.3.1.5) is presented in Table 11. On average, students had been studying French for just over 5 years, with the number of years of French study ranging from 3.4 for beginning to 7.1 for advanced. Less than 20% of beginning and intermediate students had studied abroad, compared with over half of advanced students. Over three-quarters of the sample reported that they were taking French to meet degree requirements; this included over half of beginners, about

three-quarters of intermediate students, and over 90% of advanced students. Of those

taking French to meet degree requirements, about one-third of both beginners and

intermediate students reported that they would not be taking French if it were not

required. In contrast, no advanced students, of which nearly 60% were French majors or

minors, reported that they would not take French is if were not required for their degree.

Table 11

Participant background characteristics

	Total (n = 153)		Beginning (n = 26)		Intermediate (n = 91)		Advanced (n = 36)	
	M	SD	M	SD	M	SD	M	SD
Years of French study	5.4	2.5	3.4	2.2	5.3	1.9	7.1	2.8
Study Abroad (%)	28.1		15.8		19.8		58.3	
Meeting Degree Req. (%)	75.2		53.8		74.7		91.7	
Would not take French if not required (%)	23.6		30.8		30.8		0.0	
French major/minor (%)	17.6		0.0		6.6		58.3	

Beginning-level participants were enrolled in a second-semester French class

(French 102). First-semester students were not included in the sample because the first-

semester French course was not offered in the semester during which data was collected.

Intermediate students were taking a third or fourth semester class (French 201 or 202),

and advanced students were enrolled in classes at the fifth semester level and above (300

and 400-level classes). The focus of these advanced-level classes was varied, including

grammar and composition, conversation and civilization, linguistics and literature. 42% of advanced students were taking at least one literature class at the time of the study. A majority of advanced students (64%) was enrolled in more than one French class.

Students at each level of instruction had varied opportunities for reading, and for reading each genre of text, within the curriculum. At the beginning level, students read one expository cultural note in French for each of the six chapters covered in their textbook, plus a longer reading selection. Five of six of these reading selections were expository texts or informational realia such as television listings or recipes; only one of these selections was a narrative text (a Jacques Prévert poem). Students at the intermediate level read two to three expository cultural notes for each of the five chapters covered per semester. At the time this study was conducted, first-semester intermediate students also read a total of five short narrative stories over the course of the semester. Advanced students had the greatest opportunities to read in French. Although over half of advanced students were enrolled in classes that did not focus specifically on reading literature, their textbooks were entirely in French and they read a variety of supplemental materials in French, including informational texts, songs, poems and stories.

3.2.4.2 Materials

Three of the four passages used in the pilot study were retained in the present study, including Narrative Text 1, *Les trois motocyclistes* (*The Three Motorcyclists*), Narrative Text 2, *L'œuf de Pâques* (*The Easter Egg*) and Expository Text 1, *Le café dans la vie des étudiants* (*The Café in Student Life*). The second pilot expository text, *La vague bouddhiste* (*The Buddhist Wave*) was excluded because it contained a narrative-like sequence that appeared to have facilitated its comprehension in the pilot study. *Sport:*

l'homme sans limites (*Sports: Man without Limits*), an excerpt from an article about the use of technology in competitive sports from the magazine L'Express (also excerpted from an intermediate-level textbook), was chosen as a replacement. These passages and their English translations are reproduced in Appendix A. It was expected that students would be somewhat familiar with the text topic. This text was also similar in length and in lexical and syntactic complexity to the other passages. A comparison of these features is presented in Table 12. One notable difference between the replacement expository text and the other reading passages was that it contained more semantic propositions. Nevertheless, this text was chosen despite this difference because of the dozens of passages reviewed for potential use in the study, this text was the most similar to the others in terms of cultural and topic familiarity, lexical and grammatical features, length, and source (intermediate-level textbooks).

Table 12

Text characteristics

	Narrative			Expository		
	N1	N2	*M*	E1	E2	*M*
Number of words	287	261	274	269	272	271
1K words [a]	.77	.84	.81	.81	.74	.78
Function	.51	.54	.53	.50	.43	.47
Content	.24	.28	.26	.31	.31	.31
2K words [b]	.06	.02	.04	.10	.09	.10
3K [c]	.01	.01	.01	.02	.02	.02
Words not on list	.15	.14	.15	.07	.15	.11
Words per sentence	9.6	13.2	11.4	12.6	10.5	11.6
Object pronouns	2	3	2.5	0	1	.5
Reflexive verbs	4	8	6	2	2	2
Relative pronouns	6	5	5.5	8	0	4
Semantic propositions	94	82	88	84	121	102.5

Note. N1:*The Three Motorcyclists*, N2: *The Easter Egg*, E1: *The Café in Student Life*, E2: *Sports: Man without Limits.* [a] Words appearing on the Lexical Frequency Profile's (Goodfellow, Jones & Lamy, 2002) list of the one thousand most frequently occurring words in French; analysis performed using *Web VP en français* (Cobb, 2006). [b] Words 1001-2000. [c] Words 2001-3000. [d] Listed in Appendix B.

3.2.4.3 Measures

3.2.4.3.1 Predictor variables.

3.2.4.3.1.1 Text genre.

As in the pilot, the present study examined the narrative and expository genres using two reading passages per genre (narrative: *The Three Motorcyclists, The Easter Egg;* expository: *The Café in Student Life, Sports: Man Without Limits).*

3.2.4.3.1.2 L1 reading ability.

Participants' ACT reading and/or SAT verbal scores were obtained as measures of native language reading ability. The ACT reading test requires students to read four passages and answer related comprehension questions. The SAT verbal test, which was revised and renamed "critical reading" in Spring 2005, assesses reading comprehension at both the sentence and paragraph levels. Prior to Spring 2005, the test also included items requiring students to complete analogies.

3.2.4.3.1.3 L2 proficiency.

The instrument used to assess L2 proficiency in the pilot study was a 39-item version of MSU's French placement test. The test included sections measuring grammar and vocabulary knowledge and listening and reading skills. Because ceiling effects were observed in three out of four sections of the test when taken by intermediate level students, it was deemed necessary to add some more difficult questions before administering it to a sample that included advanced-level students. The test was therefore supplemented with questions from the 2003 College Board French Advanced Placement (AP) test, an exam intended for advanced learners. An additional listening passage and five multiple-choice comprehension questions from the AP exam were added to the test.

Five grammar questions were added asking students to fill in blanks to complete contextualized statements with a demonstrative pronoun, relative pronoun or preposition. In addition, the reading section on the pilot study test was replaced with a reading passage from the AP exam and seven multiple-choice comprehension questions. After these revisions, the test included a total of 50 items: 11 listening, 7 reading, 16 grammar and 15 vocabulary.

A separate instrument to supplement the vocabulary section of the test was also administered. *X_Lex: the Swansea Vocabulary Levels Test v2.05* is a 120-item lexical decision test assessing the percentage of French words participants know in five different frequency bands ranging from 0-5000 words. The test was administered in pencil and paper format. Students were presented with a list including both French words and pseudowords and asked to indicate whether or not they knew what each word meant. The pseudowords, which respect French phonological and orthographic rules, are included in this test to control for guessing. The number of correct identifications of French words and rejections of pseudowords is adjusted by the number of incorrect acceptances of pseudowords to infer the number of words that the test taker actually knows (Mochida & Harrington, 2006).

3.2.4.3.1.4 Metacognitive knowledge.

A 55-item questionnaire was adapted from the reading and text metacognition questionnaires used in Project NELSON, a longitudinal study of reading and writing among Dutch L1-English L2 schoolchildren. (Gelderen et al., 2003, 2004; Schoonen, Gelderen, Glopper, Hulstijn, Snellings, Simis, & Stevenson, 2002). The instrument consists of statements about text characteristics and reading strategies; participants read

each statement and indicated whether or not they agreed with it. Some statements apply to reading or texts in general (e.g., "To be able to understand a text properly, you sometimes need to know things that are not said in the text") while others relate specifically to reading or texts in French (e.g., "If you don't understand a word in a French text, it is useful to try and guess its meaning from the surrounding words and sentences"). The questionnaire is reproduced in Appendix G.

3.2.4.3.1.5 L2 exposure.

The pilot study measured only one dimension of students' exposure to French: contact with reading material. Given the small amount of time that students reported spending reading in French and the numerous other contexts in which students may come in contact with the L2, the pilot study instrument was replaced with a more comprehensive questionnaire to measure the frequency and amount of students' exposure to French from a greater variety of sources. The instrument adopted for the present study was the pre-test section of Freed et al.'s Language Contact Profile (LCP) (2004). The LCP was originally developed for use in research involving students enrolled in L2 immersion or study abroad programs. It consists of a pretest assessing students' language experiences prior to embarking on the program and a posttest asking about the amount and type of L2 contact they had during the program. This post-test was judged inapplicable to the present study where the majority of participants had not participated in study abroad programs.

The questionnaire used in the present study (Appendix H) included two sections. The first section asked students for demographic data (e.g., age, sex) and information on previous and intended language study as reported in section 3.2.4.1. The second part of

the questionnaire asked students to indicate how often (daily, weekly, monthly or never) and how much time they spent doing activities where they were exposed to French. These included communicating with French speakers, watching French films or TV, listening to French music, and browsing French websites in addition to reading various types of materials in French.

3.2.4.3.1.6 Motivation and anxiety.

Results obtained in the pilot study prompted the replacement of the motivation questionnaire in the present study. The pilot questionnaire seemed to have failed to tap the full spectrum of students' reasons for studying French. It was also suspected that the lack of relationship between motivation and L2 reading comprehension in the pilot study could have resulted from the fact that the questionnaire measured motivation only for language study in general instead of motivation specific to L2 reading. Moreover, upon further consideration of research on motivation and affect in L2 reading (discussed in section 2.1.3.2), I believed that it would be important to add questions assessing other affective reactions that may be related to motivation for L2 reading and study. Both Kondo-Brown (2006) and Mori (2002), for example, found that students' perception of themselves as readers was a component of L2 reading motivation. Mori (2002) also identified readers' beliefs about the importance of reading as key to reading motivation. In a follow-up study, Mori (2004) concluded that motivational intensity as measured by students' self-reported study habits might also have relationships with reading motivation and outcomes. Yamashita's (2004) research pointed to comfort and anxiety as additional potential motivational factors in L2 reading.

In light of these considerations, a new questionnaire was constructed consisting of separate sections on motivation for and anxiety related to reading in French (38 items) and studying French (40 items). This instrument is presented in Appendix I. Items in both sections were adapted from Mori (2004), Kondo-Brown (2006) and Yamashita (2004). The questionnaire included items assessing intrinsic motivation, extrinsic motivation and amotivation as well as students' perceptions of their L2 reading and general L2 ability, their perceptions of the importance of L2 reading and L2 study, their L2 motivational intensity as measured by study habits, and their levels of comfort and anxiety in relation to L2 study and L2 reading. The scale used in the questionnaire was also changed from a 7-point to a 6-point Likert scale in order to prevent neutral responses.

3.2.4.3.2 Outcome variables.

3.2.4.3.2.1 Reading comprehension.

Free written recalls in English were again used to measure L2 reading comprehension. The recall protocols were scored using propositional analyses of English translations of the four texts as described in section 3.1.4.3.2.1; full, half and no credit responses were possible depending on whether participants recalled all, part or none of each proposition. Propositional analyses of the texts are found in Appendix B.

3.2.4.3.2.2 Genre reactions.

A 25-item questionnaire, found in Appendix J, was developed to measure students' affective reactions to reading narrative and expository texts in French. Because students may not have been familiar with the meaning of the terms "narrative" and "expository", the items used the wording "story" to refer to narratives and "informational texts" to refer to the expository genre. Questionnaire instructions further defined stories

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as "(excerpts from) short stories, novels, plays, etc." and informational texts as "(excerpts from) news articles, cultural readings, etc." The questionnaire included items to assess attitudes such as enjoyment of and interest in the genre (e.g., "I enjoy reading stories/informational texts"), beliefs about each genre's utility (e.g., "I think it is useful to read stories/informational texts"), their perceptions of the genre's comprehensibility (e.g., "I think I understand a lot when I read stories/informational texts in French"), anxiety when reading each genre, and overall genre preference when reading in the L2.

3.2.4.3.2.3 Text reactions.

In the pilot study, a post-reading questionnaire was administered to assess students' reactions to reading the four test passages using both quantitative and qualitative measures. Participants rated the difficulty and their enjoyment of each of the four reading passages on a 7-point Likert scale, then were asked to write a comment for each text explaining their rating. An analysis of these comments informed the development of a new questionnaire for the present study assessing reactions to each text. This questionnaire asked students to rate 18 statements per text on a 6-point Likert scale (a change from the 7-point scale in an effort intended to prevent the overwhelmingly neutral responses provided in the pilot study) in order to elicit more detailed information on why students enjoyed or did not enjoy each text or had positive or negative experiences when reading it. These questions were intended to tap the main constructs described in student comments in the pilot study as well as other affective dimensions measured in the present study. These factors included enjoyment and interest in the text (e.g., "I enjoyed reading this text."), utility value of the text (e.g., "It was useful to read this text"), text comprehensibility (e.g., "This text was difficult", "I think I understood

nearly all of the text") and anxiety. Students were also asked to rate their familiarity with the text's topic. Finally, participants were provided space to write any comments about their experience reading each text. This questionnaire is found in Appendix K.

3.2.5 Procedure

A similar procedure as described in section 3.1.5 was used in the present study. In the first of two experimental sessions, participants completed the predictor variable measures (L2 proficiency tests, metacognitive knowledge questionnaire, L2 contact questionnaire, motivation questionnaire) and the genre reactions questionnaire. In a second session one week later, all participants read the same two narrative and two expository passages, which were counterbalanced, and completed free written recalls in English without looking back at the texts. Students were instructed to write everything they remembered in as much detail as they remembered about each passage. There was no time limit on the reading or recall tasks. As in the pilot study, students were asked to complete an intervening math task in French after reading each text and before beginning the recall protocol. Participants then completed the Text Reactions questionnaire after performing all four reading and recall tasks. After all participants had completed the study they were provided with a description of the study's purpose by electronic mail.

3.2.6 Scoring

3.2.6.1 Predictor variables

3.2.6.1.1 L1 reading ability.

All participants consented to release their ACT reading and/or SAT verbal scores as a measure of L1 reading ability. Scores were obtained from student records housed at Michigan State University's Office of the Registrar. Because ACT scores were

available for the majority of participants (139 of 153), and only SAT scores were available for very few (n = 8), these SAT scores were converted to an equivalent of the ACT score for data analysis purposes. A multiplier was calculated based on the scores of the 45 participants who had taken both tests; each participant's ACT score was divided by his/her SAT score, a mean was calculated, and this number (.047) was then multiplied by the SAT scores for these eight participants.[1] Neither ACT nor SAT scores were available for six of the participants. These missing scores were replaced with the mean ACT score for the sample (27.64).

3.2.6.1.2 L2 proficiency.

Questions on the 50-item French proficiency test were equally weighted at one point each. A percentage correct for the overall test and for each of its four component sections (Listening, Grammar, Vocabulary and Reading) was calculated by dividing the number of correct responses by the total number of questions.

Participants also completed a paper and pencil version of *X_Lex: the Swansea Vocabulary Levels Test v2.05* to assess their French vocabulary size; students indicated whether they knew the meaning of each of 120 French words and pseudowords by selecting a "yes' or "no" box. Each student's responses were then entered into the computerized version of the test, which used the number of correctly identified words and correctly rejected pseudowords to estimate how many of the 5000 most frequently used

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[1]Although the College Board, administrator of both tests, publishes a concordance of ACT and SAT scores, the most recent comparisons available at the time the data was analyzed were based on scores that were between 12-14 years old. The College Board further advises that such comparisons "[are] dependent upon the sample used to establish the relationship between two sets of scores. Other available SAT-ACT tables use different samples of colleges and students than this table, resulting in slightly different equivalent scores. For this reason, the best concordance table is one that is established for and used by a specific institution" (College Board). Given that Michigan State University does not maintain its own concordance table (Mike Cook, personal communication, November 6, 2007), calculating a multiplier based on the present study's sample was thus judged the best method to determine equivalent scores.

words in French that each student knew. This score was then converted to a percentage by dividing the raw score by 5000.

3.2.6.1.3 Metacognitive knowledge.

The metacognitive knowledge questionnaire was comprised of 25 items assessing knowledge about texts and 30 items assessing knowledge about reading. Each item consisted of a statement with which participants agreed or disagreed. Correct responses were awarded one point and incorrect responses received zero points. A percentage score was then calculated for all 55 items as well as for each of the two component sections.

3.2.6.1.4 L2 exposure.

Participants completed the pre-test section of the Language Contact Profile, an instrument assessing their amount of exposure to French from various sources. Students indicated how often they engage in a range L2 activities and how much time they spend doing each activity; they were permitted to provide these time increments in hours per day, week or month. Because the majority of participants provided responses based on amount of contact per month, for data analysis purposes all responses were converted to hours per month by multiplying hours per day by 30 or hours per week by 4. This number of hours of French exposure per month was further broken down into subscores for different types of contact assessed by the questionnaire, including Speaking, Reading, Media (e.g., television, films, and Internet), and Other contact. The amount of students' exposure to French through study abroad experiences was represented by scores of 0 (no study abroad experience), 1 (one semester or less), 2 (two semesters) or 3 (more than two semesters).

3.2.6.1.5 Motivation and anxiety.

Two questionnaires measured participants' motivation and anxiety to French study and to reading in French. Each questionnaire contained items assessing intrinsic and extrinsic motivation and amotivation as well as affective reactions to each activity, including perceptions of its importance, self-perceived ability, and anxiety. Questions about participants' L2 study habits were also included in the French study portion of the questionnaire as a measure of motivational intensity. Scores were compiled for each of these constructs by summing the 1-6 point Likert-scale responses for the relevant questionnaire items. Scores for negatively worded items were reversed for the purposes of this calculation. While preparing data for scoring, a review of the motivation and affective reactions questionnaire prompted the elimination of two items. First, item 22 on the L2 Study portion of the questionnaire was removed, as it was an inadvertent duplicate of item 6. Item 8 ("I don't like learning French, but I think learning French is important") was also eliminated. Though originally intended as part of the Amotivation subscale, it was considered ambiguous because it also appeared to measure students' perception of the importance of learning French, a separate construct under investigation in this study.

3.2.6.1.6. Learner level.

Students reported whether they were enrolled in beginning (100-level), intermediate (200-level) or advanced-level (300 or 400-level) French classes in the semester during which data was gathered. Beginning-level students were enrolled in second-semester French, intermediate students were taking third or fourth-semester classes, and advanced students were enrolled in fifth-semester or higher courses.

3.2.6.2 Outcome variables

3.2.6.2.1 Reading comprehension.

As in the pilot study, reading comprehension scores were tabulated using a scoring protocol based on propositional analyses of the four reading passages. This process is described in detail in section 3.1.4.3.2.1. A percentage score was calculated for each text by dividing the number of propositions each participant recalled by the total number of propositions contained in the text. Collapsed mean comprehension scores were then calculated for the two narrative and two expository texts.

3.2.6.2.2 Genre reactions

A 25-item questionnaire assessed participants' attitudes and affective reactions to reading narrative and expository texts in French, including their enjoyment of and interest in the genre, their perceptions of each genre's utility, their perceptions of the comprehensibility of each genre, their levels of anxiety when reading each genre, and their overall genre preference when reading in the L2. The mean 6-point Likert scale responses for each of these affective factors were compiled, after reversing scores for any negatively worded items.

3.2.6.2.3 Text reactions

For each of the four reading passages, participants answered 18 Likert-scale questions inquiring about their reactions to reading the text. These included their interest in and enjoyment of the passage, their perception of its utility, their perception of the text's comprehensibility, their anxiety level when reading the text, and their familiarity with the text topic. Mean scores were tabulated for each of these constructs. Participants

were also provided space to write any additional comments about their experience reading each text; these comments were all transcribed.

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CHAPTER 4: RESULTS

This chapter will report the results of the main experimental study. After discussing data screening procedures, I will report descriptive statistics and correlations for the data. I will then describe the principal statistical analysis technique employed in the study, structural equation modeling, and present the results of the statistical analyses in response to the research questions.

4.1 Data screening

The two principal statistical methods used in the present study, structural equation modeling and analysis of variance, are parametric tests based on assumptions of normally distributed data. Data was therefore screened for normality by examining the histogram and skewness and kurtosis values for each variable[2]. A frequency analysis was also used to screen data for outliers, which were identified as values greater than 4 standard deviation units from the mean. Overall, data was normally distributed (i.e., skewness and kurtosis coefficients less than an absolute value of 2) with the exception of French exposure, which was positively skewed. The variables of Speaking, Reading, Media and Other French contact contained some outliers, including several implausibly large values. When the responses of the four participants who reported these large amounts of French exposure were examined individually, it was found that all had recently participated in study abroad experiences. In two cases, the participants made notes on the questionnaire that their responses were based on the amount of French contact they had had during

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[2] Unless otherwise specified, statistical analyses were performed using SPSS statistical software, version 15.0.

these experiences. Given that these responses appeared not to reflect participants' L2 exposure outside of this one-time study abroad experience and that their study abroad experiences would be accounted for as a separate L2 exposure variable, these outliers were replaced. Because variability in French exposure was expected by learner level, the replacement values were the mean scores for these L2 exposure variables as calculated for participants at same level of French study.

Even after these outlying values were replaced, the data for the French exposure variables was still non-normally distributed with the majority of values clustered at or near zero. The coefficients of skewness and kurtosis for contact involving reading, speaking, and media ranged from 2.63 to 5.83 and 6.73 to 42.12, respectively. A log 10 transformation was performed to correct this distribution.

Data was also screened for missing values, which were found for several items on the metacognition and motivation questionnaires. Since variability in metacognitive knowledge and motivation was also expected by learner level (beginning, intermediate, advanced), a mean score for each level was calculated for each item that contained missing values, and these values were replaced with the mean score corresponding to the participant's level of French study.

4.2 Descriptive statistics and correlations

4.2.1 Predictor variables

4.2.1.1 L2 proficiency

Descriptive statistics for the measures of French proficiency are presented in Table 13. Estimates of internal consistency (α = .81) indicate that overall the 50-item test

had acceptable reliability, though reliability estimates of items within its four component sections (Listening, Grammar, Vocabulary, Reading) were lower (αs = .43 - .62). Moderate correlations (r = .42 - .56) were observed between these variables, suggesting that they are related but independent constructs. The mean overall score on this proficiency test was 56%, with the best performance observed in the Vocabulary and Listening sections (68% and 60%, respectively). Reading (54%) and Grammar scores (43%) were somewhat weaker.

Table 13

Descriptive statistics and correlations for French proficiency and vocabulary size

	M[a]	SD	1	2	3	4	5
1. Listening	.60	.16	(.43)				
2. Grammar	.43	.17	.56	(.62)			
3. Vocabulary	.68	.17	.45	.51	(.54)		
4. Reading	.54	.24	.50	.53	.43	(.52)	
5. Vocabulary Size	.47	.13	.43	.58	.50	.45	(-)

Note. Values in parentheses are estimates of internal consistency (Cronbach's α). Dashes (-) indicate that internal consistency estimates could not be calculated. Mean values reflect proportion correct. All correlations are statistically significant at the .01 level.
[a] n = 153.

Vocabulary size was measured using a separate instrument, the 120-item lexical decision test. The average score on this test indicated that participants knew 47%, or about 2350, of the 5000 most common words in French. Though internal consistency estimates could not be calculated for items on this computerized test, previous research examining the reliability of this lexical decision test has reported alpha levels averaging

.76 (Mochida & Harrington, 2006), indicating good reliability. Vocabulary size scores

correlated similarly with the other measures of French proficiency (r = .43 - .58).

4.2.1.2 L1 reading ability

L1 reading ability score as measured by ACT Reading scores (or their equivalent,

as described in section 4.1.1.2) averaged 27.6 out of 36 possible points (SD = 4.6).

Though he does not specify an estimate specifically for the Reading section, Passow

(1995) notes that internal consistency estimates for the ACT English, Reading, and Math

composite tests range from .88 to .93, indicating very good reliability.

4.2.1.3 Metacognitive knowledge

Descriptive statistics and correlations for metacognitive knowledge are displayed

in Table 14.

Table 14

Descriptive statistics and correlations for metacognitive knowledge

	M [a]	SD	1	2
1. Texts	.60	.16	(.62)	
2. Reading	.43	.17	.24	(.71)

Note. Values in parentheses are estimates of internal consistency (Cronbach's α). Mean values reflect proportion correct. Correlation is statistically significant at the .01 level.
[a] n = 153.

Internal consistency estimates suggest that the questionnaire is an acceptably

reliable measure of metacognitive knowledge (α = .65), and that its component subscales

are acceptably reliable measures of knowledge about texts (α = .62) and about reading

(α = .71). Participants' mean scores for overall metacognitive knowledge were slightly

above the midpoint (56%), demonstrating greater knowledge of texts and text

organization (60%) than of reading strategies (43%).

4.2.1.4 L2 exposure

L2 exposure descriptive statistics and correlations are presented in Table 15.

Table 15

Descriptive statistics and correlations for French exposure (hours per month)

	M [a]	SD	1	2	3	4	5
1. Speaking	5.53	2.63	(.35)				
2. Reading	1.38	3.06	.34	(.51)			
3. Media	1.34	3.51	.39	.88	(.77)		
4. Other	6.03	21.53	.38	.37	.27	(-)	
5. Study abroad time [b]	.29	.49	.43	.34	.33	.17*	(-)

Note. Values in parentheses are estimates of internal consistency (Cronbach's α). Dashes (-) indicate that internal consistency estimates could not be calculated. Mean values reflect proportion correct. All correlations are statistically significant at the .01 level except as marked with an asterisk (*p < .05).
[a] n = 153. [b] 0 = no study abroad experience, 1 = 1 semester or less, 2 = 2 semesters.

Internal reliability estimates of .77 indicate that the language contact

questionnaire had acceptable reliability, though these estimates were lower for the

Speaking and Reading subscale items (α = .35 - .51), likely a function of the small

number of items for each subscale. Internal consistency estimates could not be calculated

for Other or Study Abroad exposure because each was measured by only one item. Most

types of L2 exposure were moderately correlated with each other (r = .27-.43), though

correlations were stronger ($r = .88$) between Reading and Media and weaker ($r = .17$) between Study Abroad and Other exposure.

On average, participants reported just over 14 hours per month, equivalent to roughly 45 minutes a day, of outside-of-class exposure to French. The preponderance of this contact, about 6 hours per month, was reported in an open-ended item that asked students to specify any "other activities" they did using French. A review of individual responses indicated that this contact ranged from participating in extracurricular French clubs and workshops to teaching or tutoring others in French, using French while gaming, doing French homework, and "self-talk" or rehearsal of French expressions. Though Other contact constituted the bulk of hours of exposure to French, it should be noted that only about one-quarter of participants reported engaging in these activities. Speaking contact also represented a large part of reported French exposure: about 5.5 hours per month, or roughly 40% of total L2 contact. Students reported nearly equal amounts of contact with French reading materials and media, though these amounts were quite small: less than 1.5 hours per month, or approximately 3 minutes per day. Frequency analyses revealed that more students had contact with French through speaking (85%) than either reading (52.9%) or media (39.2%).

The mean study abroad time for the sample was slightly under one-third of a semester. Just under 30% of participants reported exposure to French through study abroad experiences. No participants reported studying abroad for more than two semesters.

4.2.1.5 Motivation and anxiety

Inter-item correlations for the motivation and anxiety for French study and reading in French are presented in Appendices L and M[3], respectively. A review of these correlational analyses resulted in the removal of some questionnaire items. First, item 15 ("I am learning French because I would like to get good grades") was eliminated from the L2 Study/Extrinsic subscale because it was negatively correlated with the other items on this scale, and only weakly correlated with most other questionnaire items. Because this item was worded similarly to an item on the L2 Reading/Amotivation subscale ("I am learning to read in French merely because I would like to get good grades"), further analyses were performed to determine whether the item was a better fit on the L2 Study/Amotivation scale. However, the item was only weakly correlated ($r = .13 - .21$) with other Amotivation items and its inclusion would have reduced internal consistency of that subscale from .74 to .74, so it was instead eliminated. Next, item 30 ("Even when reading materials are dull or uninteresting, I always finish the assignments") was removed. Though intended as part of the L2 Reading/Intrinsic subscale, it was not significantly correlated with any of the other subscale items and was very weakly correlated with most other questionnaire items. Finally, five L2 Study Habits items (10, 21, 25, 28 and 30) that were only weakly correlated with the other subscale items ($r = .00 -. 35$) as well as with other questionnaire items were eliminated. These items described students' in-class behavior (e.g., "I actively participate in French classes") and whether they scheduled a regular time for French study outside of class (e.g., "I work on my French assignments according to a preplanned schedule"). The six items remaining on the L2 Study Habits subscale, in contrast, captured students' motivational intensity as

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[3] These tables are presented as an appendix instead of a table because of their length.

measured by their persistence in completing homework assignments (e.g., "Even when homework in French is tiresome, I will work hard on it") and the amount of time they spent studying French (e.g., "I think I study French a lot"). The elimination of the items also improved internal consistency estimates for the Study Habits subscale from .78 to .80. Within the remaining six Study Habits items, a pattern of stronger intercorrelations was observed within the items related to persistence in completing homework (average r = .45) and within those assessing the amount of time devoted to L2 study (average r = .56) than between the two sets of items, indicating that these two sets of items likely comprised two distinct factors.

These inter-item correlational analyses also prompted the reclassification of the Comfort and Importance items on the questionnaire to different subscales. Only one item assessed students' comfort with L2 study and reading ("Even if I cannot understand French/what I read in French completely, it doesn't bother me"). Given that it was the only item measuring this construct, it seemed to be related to an absence of anxiety, it correlated well and the most strongly with the other Anxiety items (r = .40-.50), and it fit reliably into these subscales (α = .77), it was reclassified as a measure of Anxiety after reversing its score. It was also noted that the items measuring students' perceptions of the importance of L2 study and reading were more highly correlated with the items on the Extrinsic subscales (r = .78 -.89) than they were with each other (r = .61 - .76) or with items in other subscales. Associating the Importance items (e.g., "Studying/Reading in French is important because it will be conducive to my general education") with Extrinsic motivation items was judged to be a theoretically sound change, since these questions seemed to tap a construct fitting with accepted definitions of extrinsic motivation (i.e.,

external reasons unrelated to intrinsic interest). Furthermore, reclassifying the Importance to the Extrinsic subscales improved Extrinsic subscale internal consistency estimates for the L2 study portion of the questionnaire from .89 to .92, and for the L2 reading items from .86 to .89.

Table 16 presents descriptive statistics, correlations and reliability estimates for the motivation and affect subscales after the changes described above were made. Internal consistency estimates were quite high (α = .77-.94), indicative of good reliability of the questionnaire subscales. Some similar correlation patterns were observed within both the L2 study and L2 reading sections of the questionnaire. First, there were consistently strong correlations between the Intrinsic, Extrinsic and Amotivation subscales within each section, with absolute correlation coefficients ranging from .59 - .79. Relationships between Intrinsic and Extrinsic motivation were strongest (r = .78 - .79). Amotivation was negatively related to both, and somewhat more weakly related to Extrinsic motivation (r = -.60 and -.62) than Intrinsic (r = -.72). Self-Perceived Ability for L2 study was also strongly correlated with Intrinsic, Extrinsic (positively) and Amotivation (negatively), with absolute correlation coefficients of .50 - .65. While self-perceived L2 reading ability also had a strong positive relationship with Intrinsic motivation to read in French (r = .63), its correlations with Extrinsic and Amotivation to read were moderate (r = .39 and -.39, respectively). Anxiety, on the other hand, was only weakly related to Intrinsic, Extrinsic and Amotivation. Correlations between Anxiety and Intrinsic motivation for L2 study and L2 reading were -.29 and -.24, respectively. Anxiety had a positive relationship with Amotivation, though the relationship was weaker for L2 reading (r = .15) than for L2 study (r = .26). Correlations of Anxiety with

Extrinsic motivation for both L2 study and L2 reading were negative, though not statistically significant. Anxiety's strongest relationship for both L2 study and L2 reading was an inverse one with Self-Perceived Ability, with correlations of -.45 and -.37, respectively.

L2 Study Habits were positively and strongly correlated with Intrinsic and Extrinsic motivation for L2 study ($r = ..48$ and .51, respectively) and strongly negatively related to Amotivation ($r = -.42$). L2 Study Habits also had a weaker but statistically significant relationship with Self-Perceived Ability for L2 study ($r = .27$). L2 Anxiety was not significantly correlated with Study Habits. Correlation patterns between L2 Study Habits and motivation and affective measures related to L2 reading were quite similar. In fact, slightly stronger relationships were observed between Study Habits and Intrinsic and Extrinsic motivation to read ($r = .52$) than Intrinsic and Extrinsic motivation to study French. Study Habits' relationship with self-perceived L2 reading ability was also somewhat stronger ($r = .37$) than with self-perceived L2 ability.

Correlations between the subscales in the L2 study and L2 reading sections of the questionnaire were also uniformly strong, with coefficients ranging from .76 between the Amotivation subscales to .84 between the subscales for Extrinsic motivation for L2 study and L2 reading.

Turning to the descriptive statistics, participants reported relatively high levels of extrinsic and intrinsic motivation for studying French (M = 4.91 and 4.71, respectively, out of a maximum of 6 points), and low amotivation ($M = 2.15$). Responses also indicated that students felt studying French is important ($M = 4.87$). Participants' motivational intensity for L2 study as measured by study habits was moderate

(M = 3.92), as was their assessment of their L2 ability (M = 3.90). Students also reported

only moderate levels of anxiety related to French study (M = 3.34).

Similar patterns were observed in scores for motivation and affective reactions to

L2 reading. Extrinsic and intrinsic motivation scores were relatively high

(M = 4.00 and 3.80, respectively), though not as high as corresponding scores for

motivation to study French. Amotivation scores for L2 reading were low (M = 2.24), but

slightly higher than amotivation for L2 study. Scores also indicated that participants

believed reading in French was important (M = 4.98); these scores were even slightly

higher than scores for perceptions of the importance of studying French. Mean scores for

self-perceived L2 reading ability were also moderate (M = 3.06), but were nearly one

scale unit lower than scores for self-perceived general L2 ability. While L2 reading-

related anxiety was moderate (M = 3.63), it was somewhat higher than anxiety related to

L2 study.

Table 16

Descriptive statistics and correlations for motivation and anxiety subscales

L2 study

	$M^{a,b}$	SD	1	2	3	4	5	6	7	8	9	10
1. Intrinsic motivation	4.71	1.18	(.94)									
2. Extrinsic motivation	4.90	1.08	.78	(.92)								
3. Amotivation	2.15	1.04	-.72	-.61	(.78)							
4. Self-perceived ability	3.90	1.18	.65	.54	-.50	(.87)						
5. Anxiety	3.34	1.26	-.29	-.10	.26	-.45	(.77)					
6. Study habits	3.92	1.04	.48	.51	-.42	.27	.08	(.80)				

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Table 16 continued

	M [a,b]	SD	1	2	3	4	5	6	7	8	9	10
L2 reading												
7. Intrinsic motivation	3.80	1.05	.78	.70	-.58	.57	-.26	.52	(.94)			
8. Extrinsic motivation	4.33	1.18	.73	.84	-.54	.48	-.11	.52	.79	(.89)		
9. Amotivation	2.24	.91	-.72	-.56	.76	-.42	.24	-.35	-.72	-.59	(.86)	
10. Self-perceived ability	3.06	1.03	.52	.41	-.34	.78	-.42	.37	.63	.39	-.39	(.87)
11. Anxiety	3.63	1.17	-.17	.00	.11	-.28	.78	.04	-.24	-.09	.15	-.37 (.77)

Note. Values in parentheses are estimates of internal consistency (Cronbach's α). Correlations are statistically significant at .16 for the .05 level and at .21 for the .01 level.
[a] n = 153. [b] Minimum possible = 1 (reason does not correspond at all); maximum possible = 6 (reason corresponds exactly).

4.2.2 Outcome variables

4.2.2.1 Reading comprehension

Descriptive statistics for text comprehension are displayed in Table 17.

Table 17

Descriptive statistics for reading comprehension (propositions recalled)

	M^a	SD	min	max
Narrative				
N1	.22	.12	.02	.54
N2	.22	.14	.02	.67
Both narrative	.22	.12	.02	.61
Expository				
E1	.12	.07	.01	.40
E2	.09	.06	.00	.35
Both expository	.10	.06	.01	.38
All texts	.16	.08	.02	.43

Note. N1:*The Three Motorcyclists*, N2: *The Easter Egg,* E1: *The Café in Student Life*, E2: *Sports: Man Without Limits.* Means reflect proportion of propositions recalled.
^{a} n = 153.

On the whole, participants recalled 16% of text propositions. Collapsed means show more was recalled from the narrative texts (22%) than the expository passages (10%), and more was also recalled from the two narratives than from either expository text. The same percentages of propositions were recalled from both narrative passages (22%). Differences in recalls between the two expository texts, however, existed, with more recalled from Text 1 (12%) than Text 2 (9%).

4.2.2.2 Genre reactions

Descriptive statistics, correlations and internal consistency estimates for attitudes about the narrative and expository text genres are displayed in Table 18. Reliability estimates ranging from .76 - .86 indicated that scales were reliable measures of genre interest/enjoyment, utility, and comprehensibility. Reliability estimates for the anxiety items for both genres were lower (.58), presumably because this subscale contained only two items. All subscales were significantly correlated, with absolute correlation coefficients ranging from .39 - .75.

Students reported higher interest and enjoyment for narratives in general (mean score of 4.34 on a 6-point scale) than for expository texts (M = 3.83). Ratings of the two genres' utility were nearly identical (4.50 for narratives, 4.51 for expository texts). Students believed that narratives were somewhat more comprehensible (M = 3.56) than expository texts (3.29), and also reported experiencing less anxiety when they read narrative texts (M = 3.10) than expository passages (3.24).

One additional item on the questionnaire asked students about their L2 genre preference ("If I had a choice, I would rather read stories than informational texts in French"). Mean scores (4.29) indicated that overall, participants agreed with this statement.

Table 18

Descriptive statistics, correlations and reliability for genre reactions

	$M^{a,b}$	SD	1	2	3	4
Narrative						
1. Enjoyment/interest	4.34	.98	(.86)			
2. Utility	4.50	1.07	.75	(.89)		
3. Comprehensibility/ Ability	3.56	1.01	.55	.51	(.76)	
4. Anxiety	3.10	1.13	-.45	-.33	-.73	(.58)
Expository						
1. Enjoyment/interest	3.83	1.11	(.85)			
2. Utility	4.51	1.13	.69	(.86)		
3. Comprehensibility/ Ability	3.29	1.05	.58	.53	(.78)	
4. Anxiety	3.24	1.15	-.43	-.39	-.73	(.58)

Note. Values in parentheses are estimates of internal consistency (Cronbach's α). All correlations are significant at the .01 level.

[a] $n = 153$. [b] Minimum possible = 1 (reason does not correspond at all); maximum possible = 6 (reason corresponds exactly).

4.2.2.3 Text reactions

Correlations and reliability estimates for reactions to the experimental texts are presented in Table 19. Internal consistency estimates for the four text reactions questionnaires ($\alpha = .79 - .86$) and their component subscales were uniformly high ($\alpha = .72 - .93$) with the exception of the anxiety subscales, which were somewhat lower ($\alpha = .62 - .77$). Reliability estimates were not calculated for topic familiarity, as only one question measured this construct. Reactions to all four texts exhibited a similar pattern of

correlations. Enjoyment and interest were fairly highly correlated with perceptions of the utility of the text ($r = .55 - .67$). Comprehensibility ratings were also correlated with enjoyment of and interest in the text, though the relationships were somewhat weaker ($r = .45 - .65$). Anxiety had robust negative correlations with perceptions of comprehensibility ($r = -.68 - 82$). In contrast, students' assessment of the comprehensibility of the text was fairly weakly related to the text's utility value ($r = .17 - .34$). Finally, topic familiarity had very weak correlations with the other text reactions ($r = .07 - .33$), several of which failed to achieve statistical significance. Familiarity with a text's topic also did not correlate significantly with comprehension of the text ($r = .05 - .14$).

Table 19

Descriptive statistics, correlations and reliability for text reactions

	M^a	SD	1	2	3	4
Narrative						
N1						
1. Enjoyment/Interest	4.08	.96	(.87)			
2. Utility	3.57	1.02	.63	(.75)		
3. Comprehensibility	4.07	1.07	.45	.17	(.90)	
4. Anxiety	2.73	1.10	-.48	-.18	-.79	(.64)
5. Topic Familiarity	3.36	1.42	.15	.11	.22	-.21
N2						
1. Enjoyment/Interest	4.23	1.16	(.92)			
2. Utility	3.70	1.10	.67	(.77)		
3. Comprehensibility	3.93	1.23	.65	.34	(.93)	
4. Anxiety	2.72	1.22	-.63	-.30	-.82	(.77)
5. Topic Familiarity	3.15	1.51	.33	.26	.28	-.25

Table 19 continued

	M	SD	1	2	3	4
Both						
1. Enjoyment/Interest	4.16	.96				
2. Utility	3.63	.98	.68			
3. Comprehensibility	4.00	1.06	.56	.25		
4. Anxiety	2.72	1.09	-.56	-.23	-.83	
5. Topic Familiarity	3.26	1.25	.31	.18	.23	-.22
Expository						
E1						
1. Enjoyment/Interest	3.77	1.11	(.90)			
2. Utility	3.98	.98	.55	(.77)		
3. Comprehensibility	3.76	1.06	.49	.22	(.89)	
4. Anxiety	2.93	1.08	-.45	-.25	-.68	(.62)
5. Topic Familiarity	3.87	1.31	.26	.07	.31	-.21
E2						
1. Enjoyment/Interest	3.22	1.06	(.89)			
2. Utility	3.67	.99	.67	(.72)		
3. Comprehensibility	3.12	1.13	.43	.24	(.91)	
4. Anxiety	3.29	1.09	-.38	-.20	-.73	(.62)
5. Topic Familiarity	2.90	1.19	.36	.14	.32	-.22
Both						
1. Enjoyment/Interest	3.49	.96				
2. Utility	3.82	.91	.63			
3. Comprehensibility	3.44	1.00	.45	.23		
4. Anxiety	3.11	1.00	-.41	-.22	-.72	
5. Topic Familiarity	3.39	1.03	.28	.08	-.30	-.21

Note. Values in parentheses are estimates of internal consistency (Cronbach's α). All correlations are significant at the .01 level.
[a] n = 153. [b] Minimum possible = 1 (reason does not correspond at all); maximum possible = 6 (reason corresponds exactly).

Enjoyment and interest ratings for both narrative texts (M = 4.08 – 4.23) were higher than those for the expository passages (M = 3.22 – 3.77). Utility ratings were similar for all four texts, though collapsed mean scores for the two expository texts (M = 3.82) were somewhat higher than those of the narratives (M = 3.63). Comprehensibility ratings were lower for the expository texts, with a mean ranking of 3.44 compared to 4.00 for the narrative passages. However, Expository Text 2 was rated as more difficult (M = 3.12) than Expository Text 1 (M = 3.76). Anxiety scores were somewhat lower for the narratives than the expository texts (collapsed Ms = 2.72 and 3.11, respectively), though again there were greater differences in these ratings between the two expository texts than the two narratives; Text 1 provoked less anxiety (M = 2.93) than Text 2 (M = 3.29). Finally, collapsed topic familiarity ratings for the two narrative (M = 3.26) and two expository texts (M = 3.39) were quite similar, though ratings were higher for Narrative Text 1 (M = 3.36) and Expository Text 1 (M = 3.87) than for Narrative Text 2 (M = 3.15) and Expository Text 2 (M = 2.90).

Students' comments about the four reading passages are found in Appendix N. Both narrative texts inspired more comments (Text 1, n = 30; Text 2, n = 27) than the expository passages (Text 1, n = 20; Text 2, n = 15). Comments for all texts included mentions of whether students understood the text, and often, to what they attributed the passage's comprehensibility. When these attributions were made, they most often mentioned vocabulary. Genre was also mentioned in relation to comprehension. For the narrative texts, three comments implicated genre in text comprehensibility (e.g., "It was easier to remember because it was story-like"). Two comments for Expository Text 1

mentioned that the expository genre aided comprehension, while the two genre comments for Expository Text 2 were split ("Another one I understood better than the stories", "There was just more to think about than for the stories"). Several comments mentioned familiarity as a factor in comprehensibility (e.g., "Easier, familiar objects, experiences"), and others mentioned other features specific to the text (e.g., "Very clear details").

Other comments indicated that students liked or disliked a text, and sometimes provided reasons for this reaction. Items mentioned in relation to these comments about enjoyment included genre (e.g., "I liked this excerpt the best b/c it was more of an actual story") and topic (e.g., "The Olympics are always interesting to me"), including personal connections to the topic (e.g., "I also had personal memories of sitting in European cafes meeting people..."). Some students also reacted specifically to or asked questions about the text content or message (e.g., "I knew cafes were important in France, but I didn't realize that they had their own personalities."; "...were the three motorcyclist (*sic*) part of the 9 campers? ", "It made me think of the gatorade (*sic*) commercials with the athletes on the treadmills, and they are monitoring their performance.").

4.3 Research Question 1: Individual differences and L2 reading comprehension

4.3.1 Structural equation modeling

Research Questions 1a and 1b asked about the contributions of individual difference variables to L2 reading comprehension and the interrelationships between these variables. Structural equation modeling (SEM) was judged the most appropriate statistical method to examine these relationships. SEM is a multivariate statistical analysis approach used to interpret relationships between multiple, interrelated variables.

SEM methods have several advantages over other related approaches, such as multiple regression analysis. First, SEM allows the examination of complex interrelationships between variables; it is the only analysis method that permits all relationships between multidimensional variables to be tested completely and simultaneously (Ullman & Bentler, 2004). SEM also allows the use of *latent variables,* or theoretical constructs that cannot be observed directly, but instead must be assessed by a number of indicators, called *observed variables.* Furthermore, because it estimates and removes measurement error from its analysis of relationships between these variables, SEM allows for more accurate measurements of their effects on one another. For these reasons, SEM approaches are increasingly used in multivariate L2 individual difference research (Csizer & Dörnyei , 2005; Gelderen et al, 2004; Holmes & Omar, 2006; In'nami, 2006; Lee, 2005; Proctor, et al., 2005; Pulido & Hambrick, 2008; Schoonen, et al., 1998; Woodrow, 2006; Yashima, Zenuk-Neshide, & Shimizu, 2004).

Modeling with SEM involves two core techniques, *confirmatory factor analysis* and *structural modeling.* Confirmatory factor analysis is used to test hypothesized relationships between latent variables and observed variables, or in other words, the extent to which the constructs under investigation are represented by the measures used. The model specified during the confirmatory factor analysis phase is known as a *measurement model.* Then, in the structural model, hypothesized relationships between these latent variables are specified and tested. Throughout both of these processes, model fit is evaluated and models may be respecified to improve fit. As Kline notes (2005), model respecification and reevaluation is often necessary, and is appropriate provided

that changes to the model are guided by appropriate theoretical principles and the researcher's hypotheses.

The following statistics, obtained through analyses performed using AMOS statistical analysis software version 7.0.0, will be used to describe model fits in this section. A summary of these model fit statistics and acceptable values is presented in Table 20.

Chi-square (X^2). The X^2 statistic reflects whether significant differences exist between the covariance matrix estimated by the model and the observed (sample) covariance matrix (Ullman & Bentler, 2004). Kline (2005) describes X^2 as a "badness-of-fit" index; higher values indicate worse fit of the model to the data. Although X^2 values are customarily reported in all SEM results, because they may be sensitive to sample and correlation sizes, they should not be relied upon as a sole fit statistic (Bollen & Long, 1993; Kline, 2005).

Comparative fit index (CFI) and Normed fit index (NFI). CFI and NFI measure the improvement in fit of the proposed model over a baseline model that assumes zero covariances among observed variables (Kline, 2005). Both indices are sensitive to misspecifications in relationships between latent variables and observed variables. CFI and NFI values greater than .90 indicate acceptable fit of the proposed model (Kline, 2005). Although both indices are routinely reported in SEM results, Kline proposes that CFI is the better index of fit because NFI can be overly sensitive to sample size, resulting in lower values with smaller samples. As the sample size in the present study ($n = 153$) is at the low end of the 150-case minimum recommended by Kline (2005), CFI values will be interpreted as the best measure of model fit.

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Root mean squared error of approximation (RMSEA). The RMSEA statistic reflects differences between observed and predicted covariances, and is sensitive to misspecifications of relationships between latent variables. It is generally accepted that RMSEA values of .06 or below indicate "good" fit between the proposed model and the observed data, though values as high as .08 may be considered acceptable (Byrne, 2001).

Table 20

Model fit statistics and suggested acceptable values

Model fit statistic	Acceptable Values	Notes
X^2	p < .05	Sensitive to sample, correlation size
NFI	> .90	Sensitive to sample size
CFI	> .90	
RMSEA	< .08	

Note. From Bollen & Long, 1993; Byrne, 2001; Kline, 2005, Ullman & Bentler, 2004.

4.3.1.1 Graphic representation of SEM models

Throughout this section, SEM models will be depicted graphically using output from AMOS 7.0.0. In these diagrams latent variables are represented by ovals, and observed variables by rectangles. A residual error term, representing random measurement error, is associated with each observed variable and is depicted by a circle labeled "e". Single-headed arrows point from each latent variable to its observed variables and from each error term to its observed variable. Factor loadings are printed next to the paths from latent to observed variables. These loadings are standardized

regression coefficients; when squared, they represent the percent of variance in the observed variable that is explained by the factor. Factor loadings of .40 or greater are generally considered acceptable in confirmatory factor analysis (Raubenheimer, 2004), while loadings of .70 and above provide very strong evidence that the observed variables are represented by the associated latent variable (Garson, 2008). Covariance or correlational relationships between variables are represented in SEM models using curved two-headed arrows. Coefficients for these correlational relationships are printed next to these paths.

Structural models add single-headed arrows to this diagram, indicating paths from predictor (*exogenous*) to effect (*endogenous*) latent variables, as well as the related path coefficients. Each endogenous variable is also associated with a *disturbance,* a construct analogous to residual error, representing unspecified causes of the variable. Disturbances are represented in the diagram by circles labeled "d".

4.3.1.2 Confirmatory factor analyses

In a first step, confirmatory factor analyses were performed to verify that the constructs under investigation had been satisfactorily measured. Separate analyses were carried out for the independent and dependent variables.

4.3.1.2.1. Predictor variables.

In the analysis of the predictor variables, a measurement model including the latent variables and their observed variables (indicators) described in Table 21 was initially specified. With the exception of L1 Reading Ability, which had been assessed using only one measure (ACT Reading scores or equivalent), all factors included in this initial model were latent variables composed of two or more indicators.

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Table 21

Initially specified measurement model: latent and observed variables

Latent	Observed
L2 proficiency	Listening, Reading, Grammar, Vocabulary, Vocabulary Size
(None)	L1 Reading Ability
Metacognitive knowledge	Texts, Reading
L2 exposure	Speaking, Reading, Media, Study Abroad, Other
Motivation	L2 Study/Intrinsic, L2 Study/Extrinsic, L2 Study/Amotivation, L2 Reading/Intrinsic, L2 Reading/Extrinsic, L2 Reading Amotivation
Anxiety	L2 Study Anxiety, L2 Reading Anxiety
Self-perceived ability	L2 Study Ability, L2 Reading Ability
Study Habits	Homework, Study Time

This model, however, resulted in an inadmissible solution, with negative variance occurring in the error term for Anxiety and Self-Perceived Ability. Kline (2005) notes that this type of inadmissible solution can occur in measurement models containing factors with only two indicators when smaller samples (150 cases or fewer) are involved. In this initial model both these latent variables were comprised of only two indicators, and the sample size in the present study ($n = 153$) is just on the edge of this 150 case threshold. High intercorrelations between the indicators may also contribute in an inadmissible solution, since observed variables that are closely related statistically may

not in fact measure two distinct constructs. In light of these considerations and the rather strong correlations observed between the two Anxiety indicators (L2 Study Anxiety and L2 Reading Anxiety; $r = .78$) as well as the two Self-Perceived Ability indicators (L2 and L2 Reading; $r = .78$), the model was revised to include Anxiety and Self-Perceived Ability as observed variables comprised of a collapsed mean score for their component items. While models containing Anxiety as an observed variable resulted in admissible solutions, any models containing Self-Perceived Ability as either an observed or latent variable continued to reach inadmissible solutions. I consequently decided to remove this variable from all analyses.

A new model was then specified eliminating Self-Perceived Ability and including Anxiety as an observed instead of a latent variable. Fit indices for this revised model, however, were outside the acceptable range [x^2 (190) = 413.33 (p = .00), CFI = .88, NFI =.80, RMSEA = .09]. Modification indices provided evidence that this was because the six observed variables comprising Motivation were not distinct factors. Instead, a three-factor solution for Motivation, consisting of collapsed mean scores for L2 Study and L2 Reading Intrinsic, Extrinsic and Amotivation, was indicated. This was consistent with correlation patterns described in section 4.2.1.5 above, where strong correlations ($r = .76 - .84$) were noted between the Intrinsic, Extrinsic and Amotivation subscales for L2 Study and L2 Reading. After revising the Motivation variable as described, model fit improved substantially, with indices indicating acceptable fit: x^2 (130) = 220.54 (p = .00), CFI = .93, NFI =.85, RMSEA = .07. Figure 1 represents this model and the loadings for each factor. Loadings ranged from .38 to 1.00 and were all statistically significant ($p < .01$), indicating adequate measurement of the latent variables by their indicators.
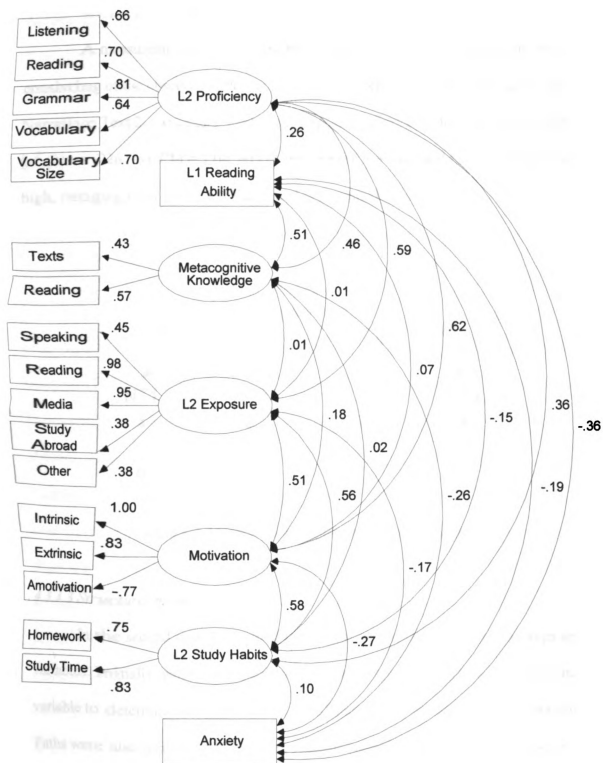
Figure 1. Measurement model for predictor variables.

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4.3.1.2.2. Outcome variable.

A measurement model for Reading Comprehension was specified and tested, consisting of the observed variables of recall comprehension scores for Narrative Text 1, Narrative Text 2, Expository Text 1 and Expository Text 2. Model fit was excellent $[x^2 (2) = .226 (ns)$, CFI = 1.00, NFI = .999, RMSEA = .00], and factor loadings were high, ranging from .68 to .88. The model is presented in Figure 2.
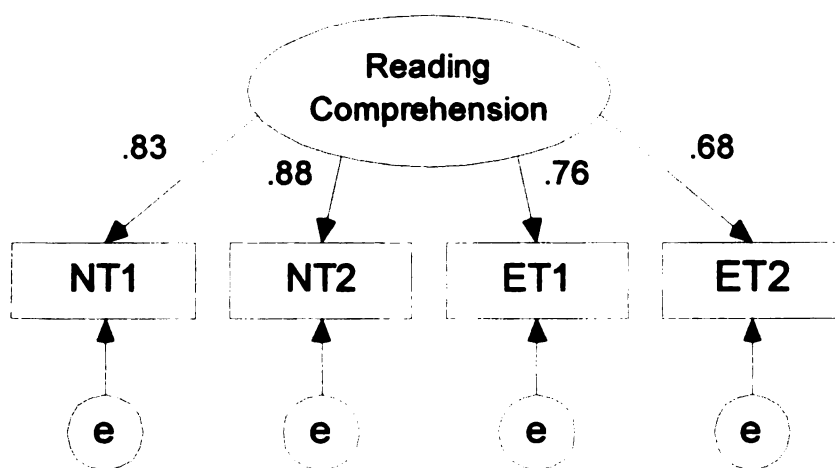
Figure 2. Measurement model for outcome variable.

4.3.1.3 Structural model

In the second step, a structural model was created to test the relationships among variables. Initially, paths were specified between all predictor variables and the outcome variable to determine which had direct, significant effects on reading comprehension. Paths were also specified between the predictor variables reflecting the hypotheses presented in section 3.2.3. To summarize these hypotheses, L1 Reading Ability and L2 Proficiency were expected to have direct, positive effects on Reading Comprehension;

Metacognition was hypothesized to have positive effects on L1 Reading Ability; L2 Exposure was expected to contribute to L2 Proficiency; positive effects of Motivation were expected on L2 Exposure, Study Habits and L2 Proficiency; L2 Study Habits were hypothesized to have positive effects on L2 Proficiency; Anxiety was predicted to have negative effects on L2 Exposure and L2 Proficiency.

The initially specified structural model is presented in Figure 3[1]. Overall model fit was within acceptable parameters: x^2 (214) = 326.68 (p = .00), CFI = .94, NFI = .84, RMSEA = .06. In this model, consistent with hypotheses, L2 Proficiency had positive, significant effects on Reading Comprehension (.74). Effects of L1 Reading Ability were also significant and positive, though weaker (.15). Direct effects of the other predictor variables on Reading Comprehension were small and non-significant. Metacognitive Knowledge's contributions to Reading Comprehension were mediated as expected through effects on L1 Reading Ability (.53), but also through L2 Proficiency (.38). L2 Exposure, as predicted, contributed significantly (.39) to L2 Proficiency. Motivation also contributed directly (.40) to L2 Proficiency, with even larger contributions to L2 Exposure (.50) and L2 Study Habits (.68). Contrary to expectations, L2 Study Habits had no significant effects on any other factors. Its contribution to L2 Proficiency, in fact, was negative, though quite weak (-.05). Finally, though Anxiety had an expected negative effect on L2 Proficiency (-.12), this effect was non-significant. Anxiety's negative effect on L2 Exposure was also very weak (-.04). Instead, Anxiety had a significant positive effect on L2 Study Habits (.24).

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[1] Indicators that were depicted in graphic representations of the measurement models have been removed from the representations of structural models for ease of presentation.

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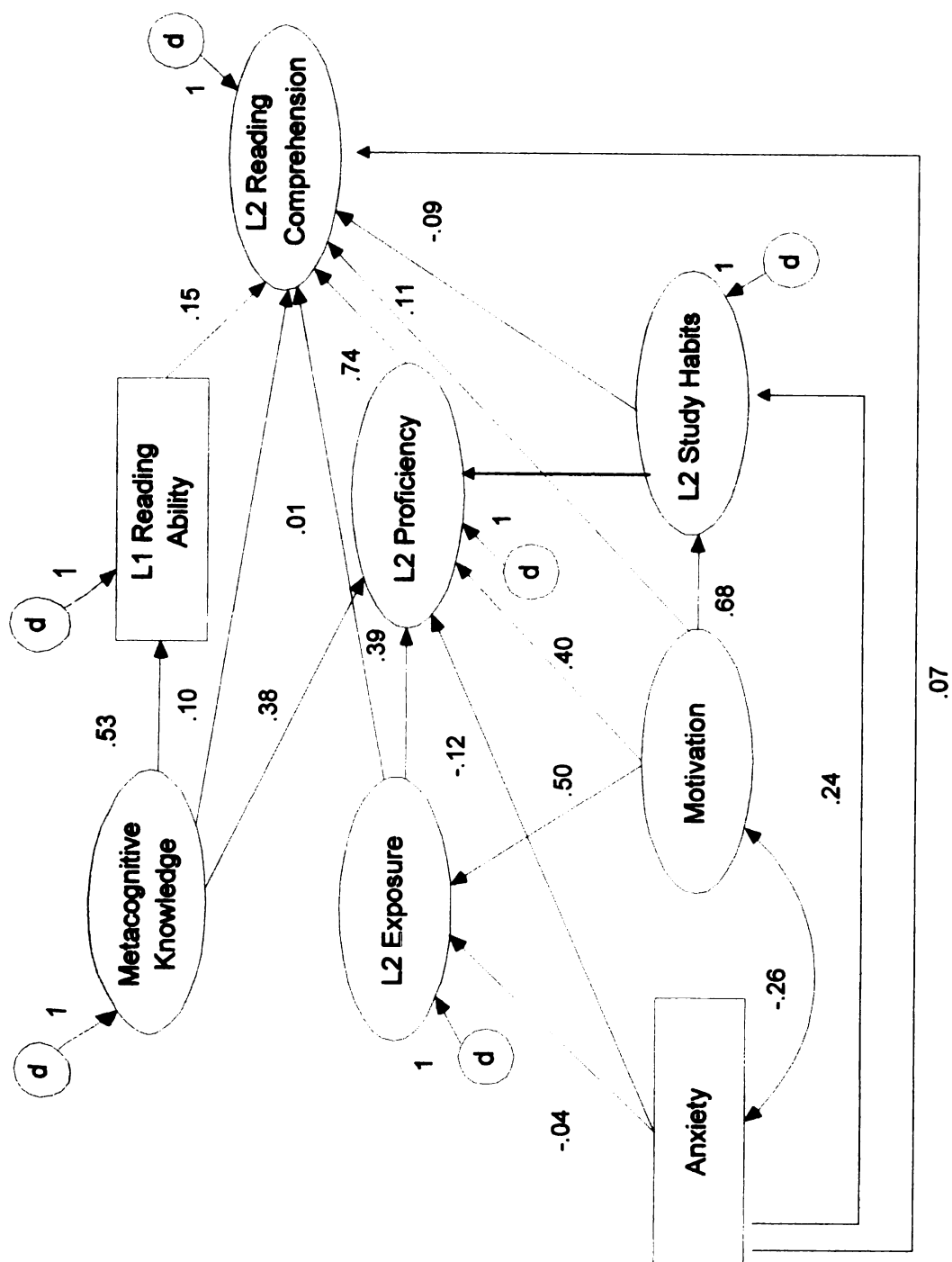
Figure 3. Initial structural model (all hypothesized paths).

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In a final step, the non-significant paths in the structural model were removed. This final structural model is presented in Figure 4. The removal of non-significant paths resulted in changes in regression weights for relationships between L1 Reading Ability, L2 Proficiency, Metacognitive Knowledge, and Reading Comprehension. L2 Proficiency's effect on Reading Comprehension increased slightly (.79), but the contribution of L1 Reading Ability increased more (.19). Together, these variables accounted for 67% of variance in Reading Comprehension. Metacognitive Knowledge's contribution to L1 Reading Ability remained the same, but its effect on L2 Proficiency increased from .39 to .43. Regression coefficients for other paths between variables in the model changed little or remained constant. Fit indices for this final structural model were identical to the previous model and again indicated acceptable fit: x^2 (214) = 326.68 ($p = .00$), CFI = .94, NFI = .84, RMSEA = .06.
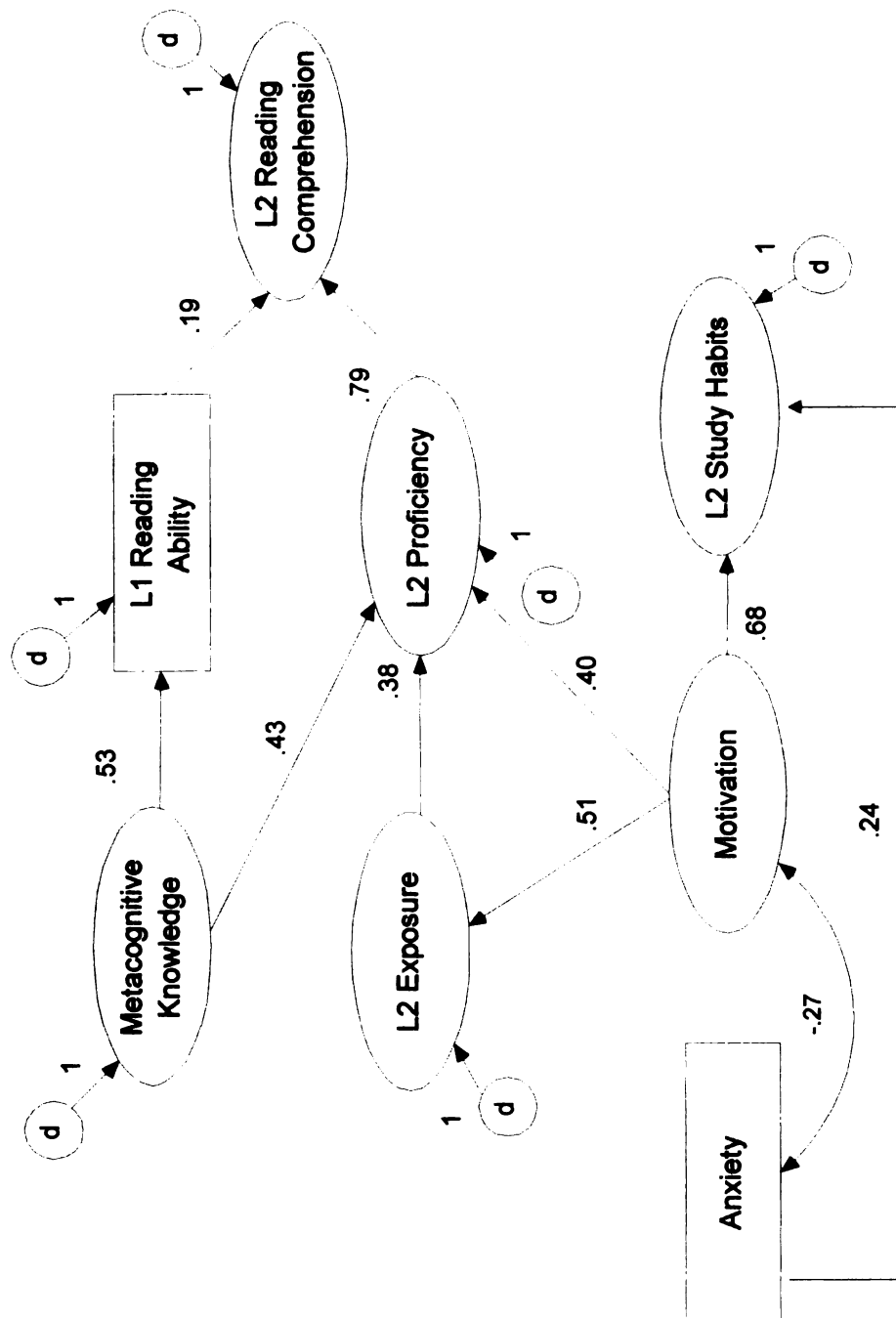
Figure 4. Final structural model (significant paths only).

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4.4 Research Question 2: Text genre and L2 reading comprehension

4.4.1 Research Questions 2a and 2b: Genre, level and reading comprehension

Research Question 2a asked about differences in L2 reading comprehension by text genre. It was expected that significantly more would be recalled from the narratives than the expository texts, and that genre would have a significant main effect on reading comprehension. Research Question 2b inquired about differences in comprehension of each genre by learner level (beginning, intermediate, advanced). It was hypothesized that differences in comprehension of the two genres (higher comprehension scores for narrative texts) would be greatest among advanced learners, and greater among intermediate level learners than beginners.

Collapsed mean scores (displayed in Table 17) showed that participants comprehended more from the narrative texts, a difference that was statistically significant as determined by paired-sample t-test ($p = .00$). To determine the effects of genre on reading comprehension scores and the effects of learner level on comprehension of each genre, a 2 x 2 factorial ANOVA was performed with Level as a between-subjects factor, and Genre and Text as within-subjects factors, each with two levels (Narrative and Expository; Text 1 and Text 2). A Bonferroni adjustment for multiple comparisons was applied to this analysis. Results, reported in Table 22, showed significant main effects for Level [$F (2, 150) = 20.33, p = .00$], Genre [$F (1, 150) = 219.51, p = .00$], and Text [$F (1, 150) = 8.93, p = .00$]. Genre's effect size very large ($r = .77$), and was more than twice that of Level ($r = .35$) and three times that of Text ($r = .24$). These results confirmed that there were significant differences in reading comprehension scores by genre and by learner level, and also by text that was read. Students of all levels

comprehended significantly more from the narrative passages. Not surprisingly, students enrolled in advanced classes outperformed intermediate and beginning-level students, and intermediate students outperformed beginners.

Table 22

Analysis of variance for effects of genre, text and level on reading comprehension

Source	*df*	SS	MS	F	*p*
Between Subjects					
Level	2	.86	.43	20.33	.00
Error	150	3.18	.02		
Within Subjects					
Genre	1	1.32	1.32	219.51	.00
Genre x Level	2	.15	.07	12.05	.00
Error (Genre)	150	.90	.01		
Text	1	.03	.03	8.93	.00
Text x Level	2	.00	.00	.45	.64
Error (Text)	150	.44	.00		
Genre x Text	1	.04	.04	11.20	.00
Genre x Text x Level	2	.05	.03	8.22	.00
Error (Genre x Text)	150	.47	.00		

Significant interactions between Genre and Level [F (2, 150) = 12.05, p = .00], Genre and Text [F (1, 150) = 11.20, p = .00], and Genre, Text and Level [F (2, 150) = 8.22, p = .00] were also observed. All effect sizes were moderate, ranging from .23 to .27. As hypothesized, differences in comprehension scores between the narrative and expository texts were greatest for advanced-level students, and greater for intermediate students than beginners. Figure 5 illustrates the interaction between Genre and Level. Advanced learners recalled 15% more narrative (29%) than expository propositions

(14%). This difference was somewhat less pronounced for intermediate students, who recalled 21% of narrative propositions and 10% of expository propositions, a difference of 11%. Though statistically significant, the differences between narrative (12%) and expository (7%) scores for beginners were the least marked (5%).

The interaction between Genre and Text, represented in Figure 6, pointed to a different pattern in comprehension scores within each genre. Estimated marginal means for this interaction showed that while comprehension scores for the two narrative texts were identical (22%), scores for the two expository texts were not; fewer propositions were recalled from Expository Text 2 (9%) than from Text 1 (12%).
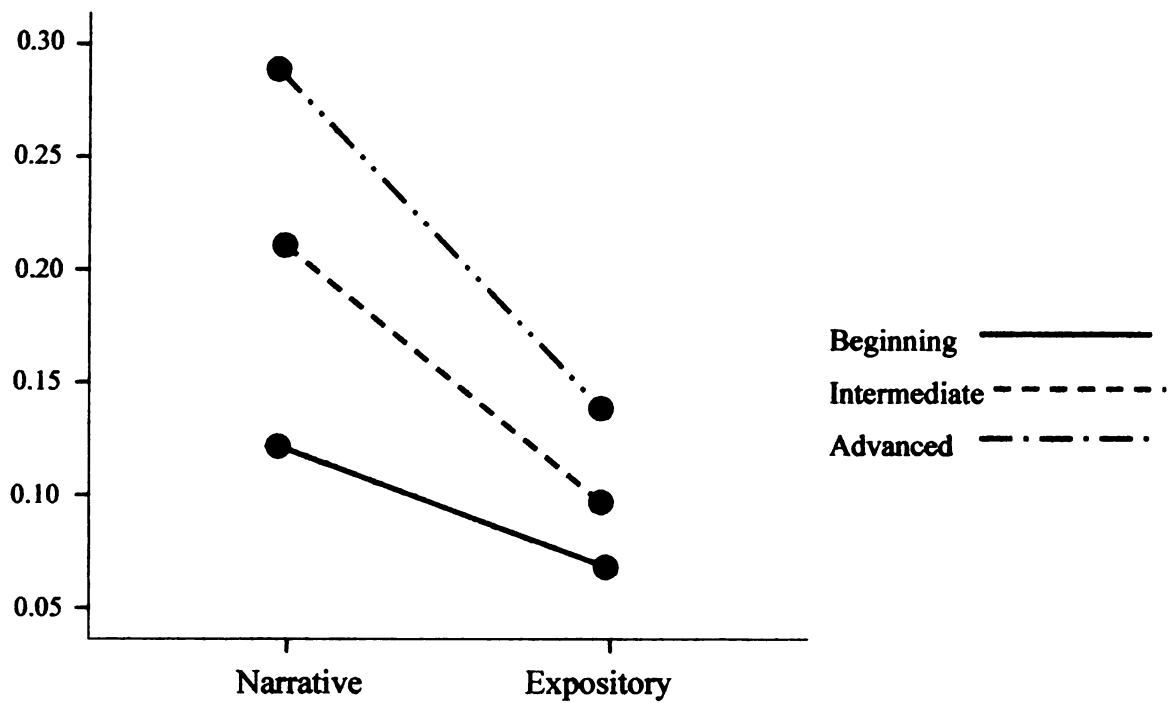
Figure 5. Reading comprehension scores by genre and learner level.
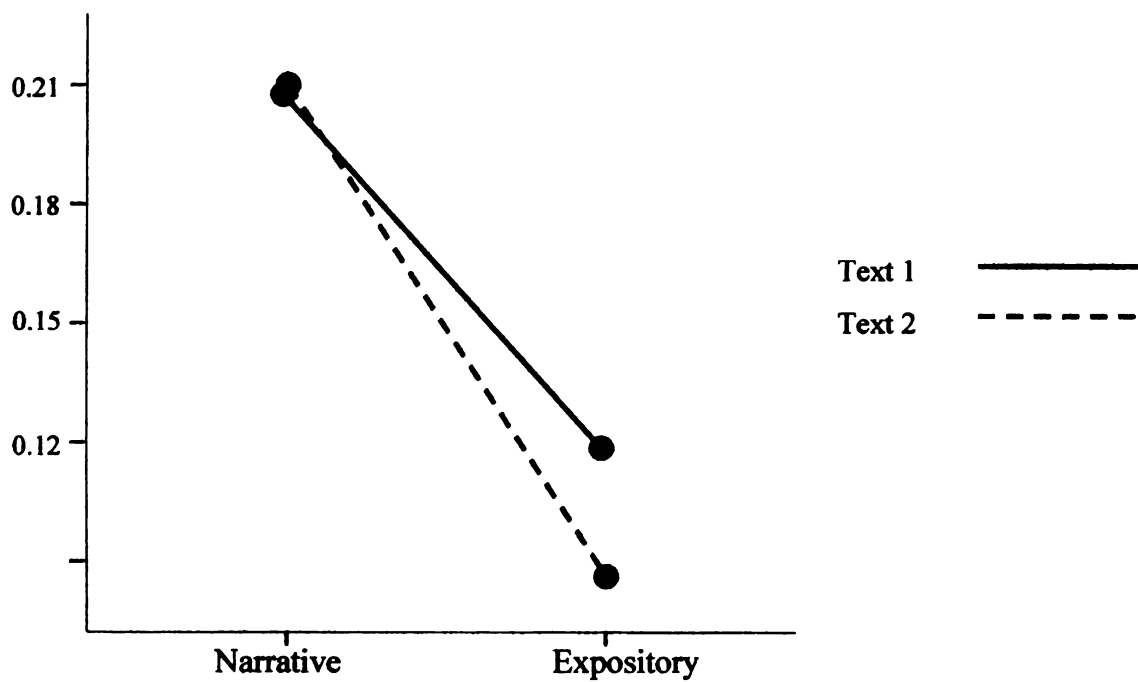
Figure 6. Reading comprehension scores by genre and text.

The interaction between Genre, Text and Level as depicted in Figure 7 shows a differential pattern of scores between the two texts by genre among beginning, intermediate and advanced students. Within the narrative genre, both beginners and intermediate readers comprehended somewhat more from Text 1 than from Text 2 (beginning 2% more; intermediate, 1% more). Advanced students, on the other hand, comprehended 4% more from Text 2 than Text 1. Within the expository genre, all groups comprehended more from Text 1 than Text 2. There was no significant interaction, however, between Text and Level, indicating that there was no difference in scores by learner level between all the four texts taken together.
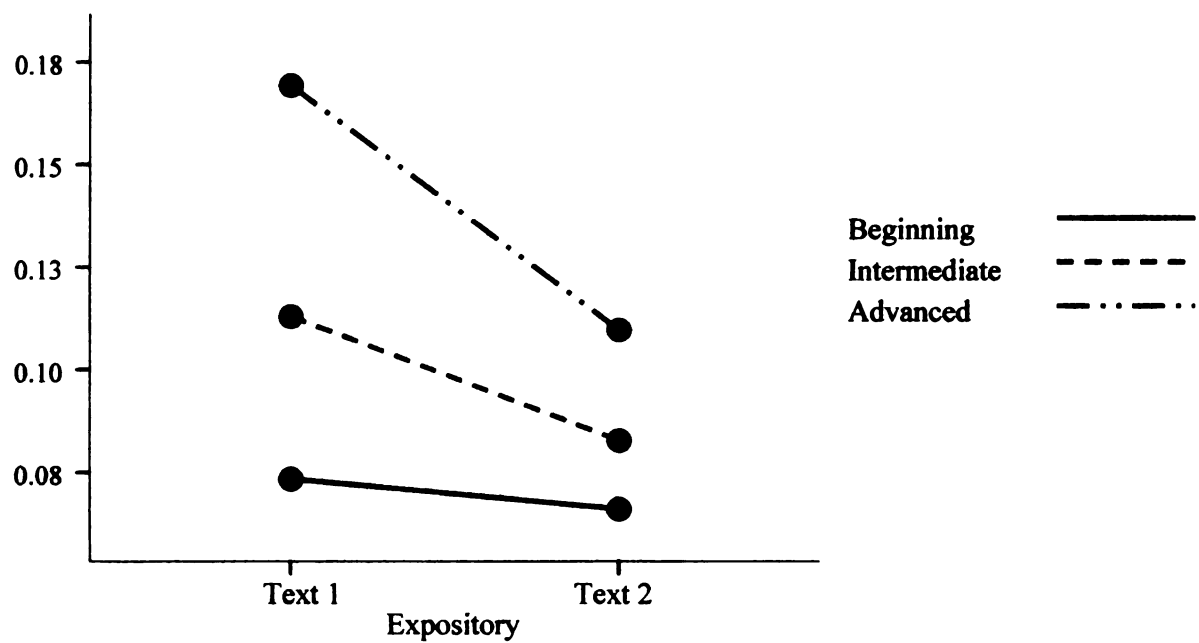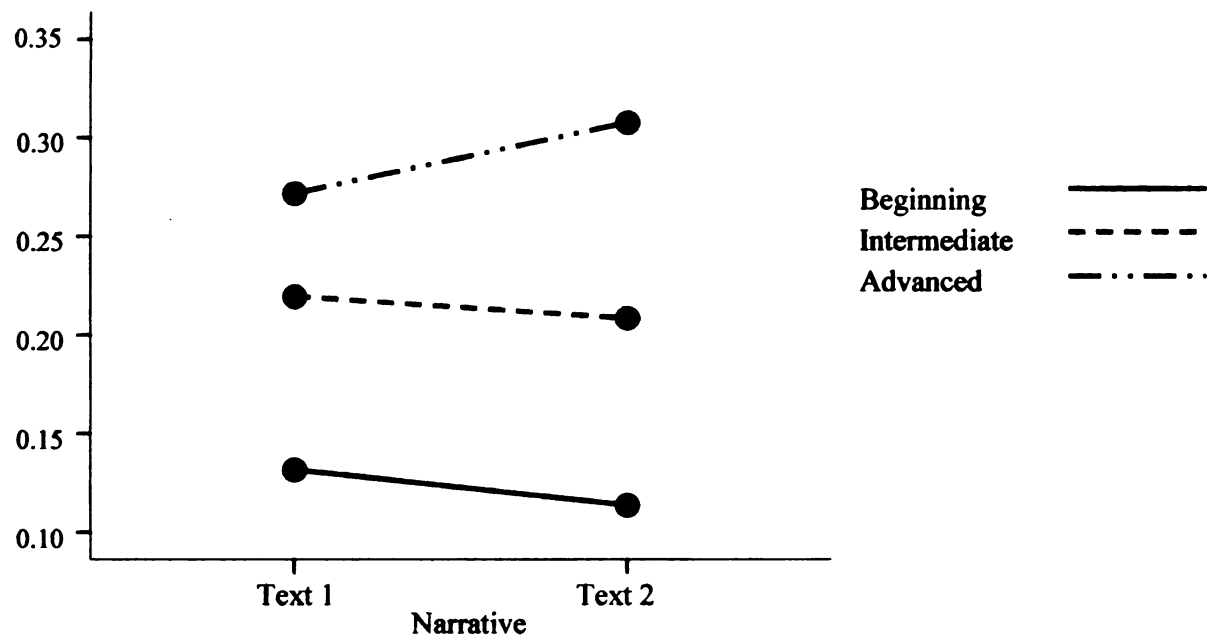
Figure 7. Reading comprehension scores by genre, level and text.

4.4.2 Research Question 2c: Genre and individual differences

Research question 2c asked whether individual differences contributed differently to comprehension of the two genres. It was expected that the contributions of L1 reading ability and L2 proficiency would be greater for expository texts than for the narrative passages. To test this hypothesis, two separate structural models were specified and tested, one with narrative comprehension and one with expository comprehension as the outcome variable. Regression coefficients for paths within the two models were then compared for statistical significance. These models and their significant paths are presented in Figures 8 and 9.

Fit statistics for both models were acceptable [narrative model, x^2 (181) = 277.22 (p = .00), CFI = .94, NFI = .84, RMSEA = .06; expository model, x^2 (181) = 295.23 (p = .00), CFI = .92, NFI = .83, RMSEA = .06]. Although both models showed similar relationships between variables, differences in several path regression weights were observed. As expected, the contributions of L1 Reading Ability and L2 Proficiency to L2 Reading Comprehension were greater in the expository comprehension model than in the model of narrative comprehension. However, only the differences in the contributions of L2 Proficiency between the two models were statistically significant (p < .05) as determined by the critical ratio for differences between these regression weights (CR = 2.29). Differences in path regression coefficients were also noted in the contributions of L2 Exposure to L2 proficiency and Motivation to L2 Proficiency, but these differences were not statistically significant.

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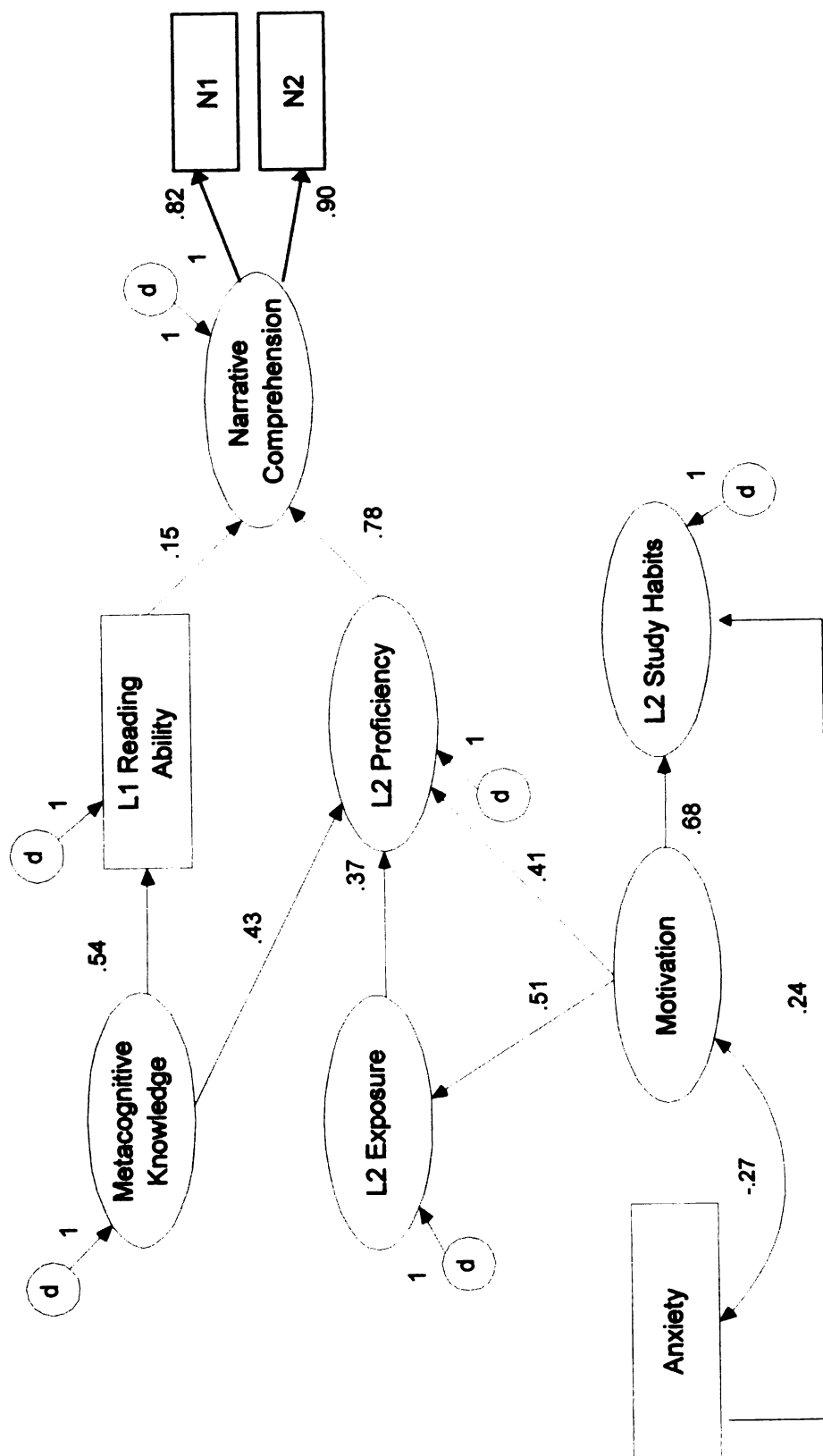
Figure 8. Structural model for narrative text comprehension (significant paths only).
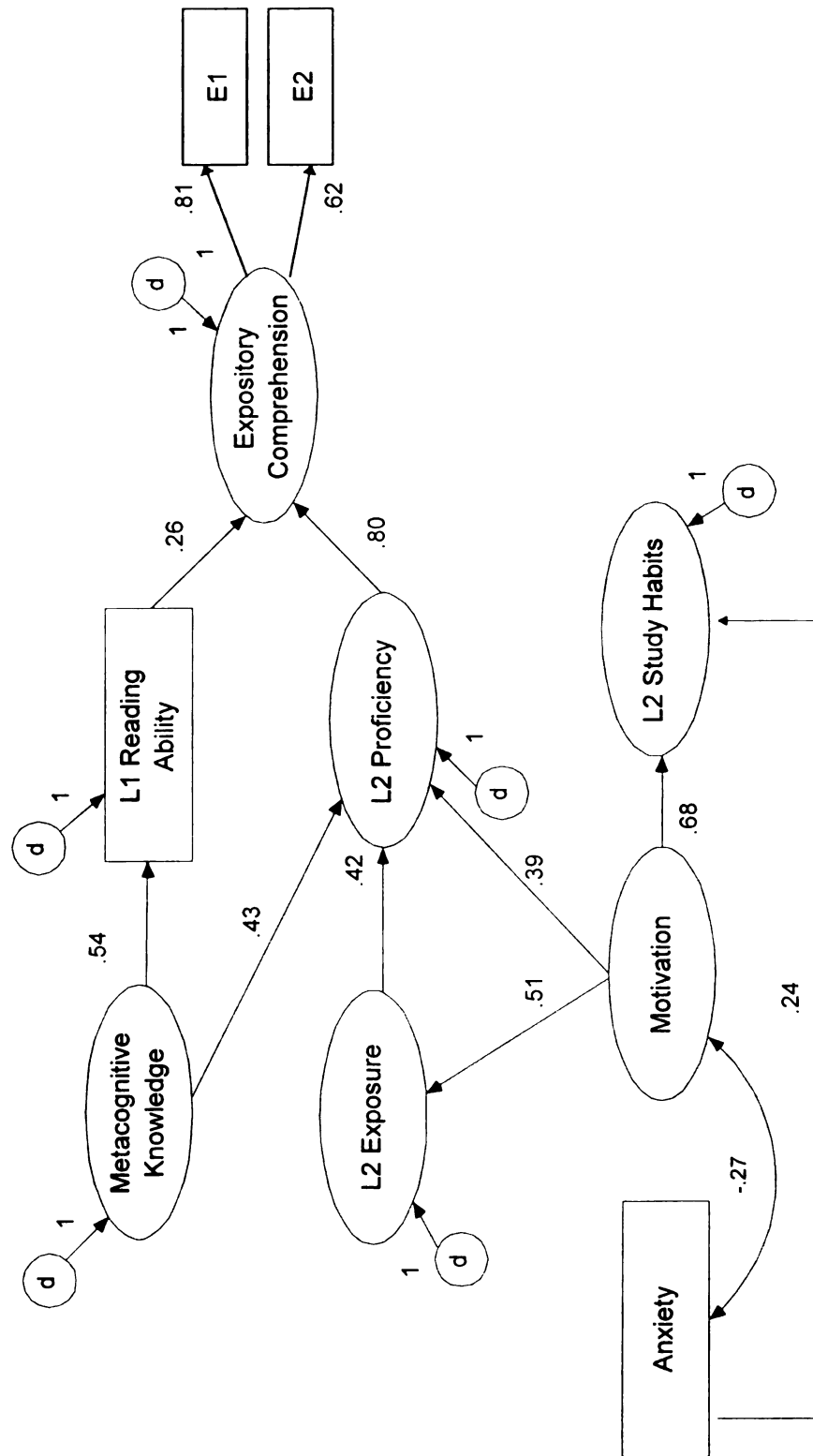
Figure 9. Structural model for expository text comprehension (significant paths only).

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4.5 Research Question 3: Genre and text reactions

4.5.1 Research Question 3a: Genre reactions

Research Question 3a inquired about readers' reactions to the narrative and expository genres in the L2, their L2 genre preference, and whether these reactions differed by learner level. It was expected that readers of all levels would report greater levels of interest and enjoyment for the narrative genre and would express a preference for reading narrative texts, but would believe expository texts have greater utility value. Advanced students were expected to report greater levels of enjoyment, greater utility value, greater comprehensibility and less anxiety related to both genres than intermediate or beginning students, however, this difference between advanced and lower-level students was expected to be more pronounced for the narrative genre.

As hypothesized, overall mean scores for interest and enjoyment were greater for the narrative genre, a difference that was statistically significant by paired-sample t-test ($p = .00$). Participants likewise found the narrative genre significantly more comprehensible ($p = .00$) and less anxiety provoking ($p = .01$) than expository texts. Mean scores of 4.29 on a scale of 6 for Item 17 ("If I had a choice, I would rather read stories than informational texts in French") also confirmed the hypothesis that overall students would prefer the narrative genre. Contrary to expectations, however, participants did not associate a greater utility value with the expository genre; mean utility scores were nearly identical for the two genres (narrative $M = 4.50$; expository $M = 4.51$; $p = .90$).

To analyze these results by learner level, a one-way between-subjects analysis of variance (ANOVA) compared genre reaction scores (Enjoyment/Interest, Utility,

Comprehensibility, Anxiety) and scores for Item 17 (Genre Preference) for the beginning, intermediate and advanced groups. These results are presented in Table 23. There was a significant effect ($p < .04$) of learner level on all reactions to both the narrative and expository genres. Within both genres, these effect sizes were small to moderate for Enjoyment/Interest and Utility ($r = .21-.24$), moderate for Anxiety ($r = .31-.35$) and large for Comprehensibility ($r = .43-.44$). Preference of the narrative genre, however, did not vary by learner level ($p = .93$).

Table 23

Analysis of variance for effects of learner level on genre reactions

Source		df	SS	MS	F	p
Narrative						
Enjoyment/Interest						
	Between	2	8.29	4.14	4.55	.01
	Within	150	136.63	.911		
	Total	152	144.92			
Utility						
	Between	2	9.90	4.95	4.50	.01
	Within	150	165.08	1.10		
	Total	152	174.98			
Comprehensibility						
	Between	2	28.86	14.43	17.10	.00
	Within	150	126.60	.844		
	Total	152	155.46			
Anxiety						
	Between	2	18.94	9.47	8.13	.00
	Within	150	174.69	1.17		
	Total	152	193.63			

Table 23 continued

Source	df	SS	MS	F	p
Expository					
Enjoyment/Interest					
Between	2	7.87	3.93	3.29	.04
Within	150	179.09	1.19		
Total	152	186.97			
Utility					
Between	2	11.23	5.62	4.62	.01
Within	150	182.25	1.215		
Total	152	193.48			
Comprehensibility					
Between	2	31.48	15.74	17.46	.00
Within	150	135.20	.901		
Total	152	166.68			
Anxiety					
Between	2	25.24	12.62	10.68	.00
Within	150	177.31	1.18		
Total	152	202.55			
Preference					
Between	2	.33	.16	.08	.93
Within	150	315.02	2.10		
Total	152	315.35			

To further analyze level effects, post hoc comparisons of genre reaction scores by level were performed using a Bonferroni adjustment for multiple comparisons. Results are displayed in Table 24. Within the narrative genre, beginning and intermediate-level learners' reactions were for the most part aligned, with one exception: beginners found the narrative genre significantly less comprehensible than intermediate students. Clear

differences in all categories of reactions to the narrative genre were observed between beginners and advanced students, as well as between intermediate and advanced students. Advanced students reported greater levels of enjoyment/interest, perceptions of genre utility and comprehensibility, and less anxiety related to reading narrative texts. Turning to expository genre reactions, there were no differences between beginning and intermediate learners' reactions to this genre, however, the same pattern of differences emerged as observed in the narrative genre when comparing reactions of beginning and intermediate students with those of advanced learners.

Table 24

Means and post hoc results (Bonferroni) for effects of learner level on genre reactions

	Narrative							
	Enjoyment/ Interest		Utility		Comprehensibility		Anxiety	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Beginning	4.17 a,b	1.07	4.19 a	1.29	2.95 a	1.07	3.46 a	1.17
Intermediate	4.22 a	.97	4.41 a	1.04	3.47 b	.90	3.24 a	1.04
Advanced	4.76 b	.83	4.93 b	.85	4.27 c	.84	2.48 b	1.10

	Expository							
	Enjoyment/ Interest		Utility		Comprehensibility		Anxiety	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Beginning	3.84 a	.93	4.23 a	1.14	2.69 a	.92	3.65 a	1.11
Intermediate	3.67 a	1.18	4.40 a	1.18	3.16 a	.87	3.41 a	1.09
Advanced	4.23 b	.95	4.98 b	.83	4.05 b	.88	2.53 b	1.06

	Preference	
	M	*SD*
Beginning	4.19 a	1.34
Intermediate	4.32 a	1.48
Advanced	4.28 a	1.43

Note. Means with different subscripts differ significantly vertically at $p < .05$.

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4.5.2 Research Question 3b: Text reactions

Research Question 3b asked about students' reactions to the four passages they read in the study, and whether these reactions differed by genre. It was hypothesized that students would report greater levels of enjoyment/interest, greater comprehensibility and less anxiety related to the narrative texts that they read, but would find that the expository texts that they read had greater utility value. It was further expected that these reactions would vary not only by genre, but also by text. Descriptive statistics for text reactions, presented in section 4.2.2.3, were consistent with these hypothesized patterns. To test the statistical significance of these relationships, a 2 x 2 repeated measures ANOVA was performed for each of the text reactions (Enjoyment/Interest, Utility, Comprehensibility, Anxiety[1]) with Genre and Text as fixed factors, each with two levels (Narrative and Expository; Text, Text 1 and Text 2). Results of this analysis are presented in Table 25. As hypothesized, Genre had a significant main effect ($p = .00$) on all four categories of text reaction scores, ranging from a small effect size on Anxiety ($r = .16$) to moderate effect on Utility ($r = .24$) and large effects on Comprehensibility ($r = .47$) and Enjoyment ($r = .52$). There was also a significant main effect for Text ($p < .04$), which was small for Utility ($r = .17$), moderate for Anxiety ($r = .16$) and Enjoyment, ($r = .30$) and large for Comprehensibility ($r = .51$). A significant interaction between Genre and Text ($p = .00$) also existed, which was small for Utility ($r = .14$) and moderate for Anxiety ($r = .31$), Comprehensibility ($r = .37$) and Enjoyment ($r = .43$). Thus, not only did reactions to the texts vary by genre but they also varied by text, and within each genre a different pattern

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[1] Though data on topic familiarity was also gathered on the Text Reactions questionnaire, it was not included in the present analysis. Since each text dealt with a topic completely unrelated to those of the other texts, genre was not expected to contribute to variance in topic familiarity. Topic familiarity was also not judged relevant to other analyses in the present study because, as described in section 4.2.2.3, it did not correlate with comprehension of the texts.

of reactions was observed between the two texts. Within the narrative genre, estimated marginal means for this interaction showed that students enjoyed Text 2 more than Text 1 and believed it had greater utility value. However, they found Narrative Text 1 more comprehensible and less anxiety provoking than Text 2, though anxiety ratings for the two narrative texts were relatively low ($M = 2.72$). In the expository genre, in contrast, reactions to Text 1 were consistently more positive; students reported greater levels of enjoyment, greater utility value, greater comprehensibility and less anxiety.

Table 25

Analysis of variance of effect of genre and text on text reactions

Source	df	SS	MS	F	p
Enjoyment/Interest					
Genre	1	67.09	67.09	56.41	.00
Error (Genre)	152	180.77	1.19		
Text	1	6.40	6.40	15.21	.00
Error (Text)	152	63.93	.421		
Genre x Text	1	18.33	18.33	33.65	.00
Error (Genre x Text)	152				
Utility					
Genre	1	5.47	5.47	9.03	.00
Error (Genre)	152	92.18	.61		
Text	1	1.36	1.36	4.40	.04
Error (Text)	152	46.86	.31		
Genre x Text	1	7.57	7.57	23.90	.00
Error (Genre x Text)	152	48.12	.317		

Table 25 continued

Source	df	SS	MS	F	p
Comprehensibility					
Genre	1	47.68	47.68	43.87	.00
Error (Genre)	152	165.18	1.09		
Text	1	23.60	23.60	54.83	.00
Error (Text)	152	65.43	.43		
Genre x Text	1	10.07	10.07	23.48	.00
Error (Genre x Text)	152				
Anxiety					
Genre	1	22.83	22.83	29.74	.00
Error (Genre)	152	116.68	.77		
Text	1	4.62	4.62	13.13	.00
Error (Text)	152	53.53	.35		
Genre x Text	1	5.65	5.65	16.38	.00
Error (Genre x Text)	152	52.42	.35		

4.6 Summary of results

Research questions 1a and 1b asked about the contributions of individual

differences to L2 reading comprehension, as well as the interrelationships of these

variables. Structural equation modeling was used to examine these relationships. Within

the resulting model, L1 reading ability and L2 proficiency made significant and direct

contributions to reading comprehension in French. L2 proficiency, however, was a much

greater predictor of L2 reading comprehension, accounting for more than 15 times more

variance than L1 reading ability. These two variables explained 67% of the variance in

L2 reading comprehension. Other individual differences contributed indirectly to L2

reading through direct contributions to other variables in the model. As hypothesized,

metacognitive knowledge contributed to L1 reading ability, but also made a significant though somewhat smaller contribution to L2 proficiency. L2 exposure contributed to L2 proficiency as expected. Motivation contributed to both L2 exposure and proficiency, with its largest contribution to L2 study habits. L2 study habits, however, did not significantly predict L2 proficiency. Rather surprisingly, their relationship with L2 proficiency was negative, but statistically non-significant. Anxiety did not make any hypothesized contributions to variables in the model, though it did make an unexpected significant and positive contribution to L2 study habits. Together, all these individual difference variables explained 73% of L2 reading comprehension variance.

A second set of research questions inquired about differences in reading comprehension due to text genre (Research Question 2a), differences in the comprehension of each genre by learner level (Research Question 2b), and the contributions of individual differences to comprehension of each genre (Research Question 2c). Participants comprehended significantly more from the two narrative passages than from the expository texts, as expected. The effect of genre on reading comprehension was significant and sizeable. However, significant interactions between genre and text existed, indicating differences in comprehension by text within each genre. Comprehension scores were identical for the two narrative texts, but students recalled significantly less from the second expository text than from the first. Even so, comprehension scores were significantly higher for both of the narrative texts than for either one of the expository passages. These differences in comprehension of each genre were found among learners at all three levels of instruction (beginning, intermediate and advanced), although the differences were more pronounced at the advanced level than

intermediate or beginning, and more pronounced among intermediate learners than beginners. When comprehension of each genre was included in a model of individual differences, L2 proficiency's contribution to expository comprehension was significantly greater than its contribution to narrative comprehension.

A third set of research questions inquired about students' affective reactions to reading both genres in general and the experimental texts in particular. Research question 3a inquired about students' affective reactions to reading the narrative and expository genres in the L2, and whether these reactions vary by learner level. Significant main effects of genre on students' reactions indicated greater enjoyment, greater perceptions of comprehensibility and less anxiety related to the narrative than the expository genre in the L2. Furthermore, students reported a preference for reading narrative texts. Somewhat unexpectedly, however, students did not find reading expository texts in the L2 more useful than reading narratives even though the expository genre 's primary communicative purpose is informational. Reactions to each genre varied significantly by learner level, with advanced students reporting greater enjoyment, utility and comprehensibility and the less anxiety related to both genres. Beginning and intermediate students' reactions to genre were statistically identical, with the exception of perceptions of comprehensibility; beginners found narrative texts less comprehensible than intermediate students did.

Research Question 3b asked about students' reactions to the four passages they read in the present study. The significant effect of genre on their reactions to the texts indicated that they enjoyed the two narrative texts more, believed they understood them more, and experienced less anxiety when reading them. However, they found the two

experimental expository passages significantly more useful to read. Within each genre, nevertheless, a significant main effect of text on students' reactions indicated that these reactions to the individual texts were quite varied. Participants' comments suggested that in addition to genre, other text characteristics, including knowledge and interest in the topic, text organization, prominence of text details, vocabulary and grammar also influenced their experience reading the four texts.

CHAPTER 5: DISCUSSION AND IMPLICATIONS

In this chapter I will discuss the results reported in Chapter 4 as they relate to the research questions investigated in the present study. For each research question I will summarize and discuss the results as well as their theoretical implications. Methodological and pedagogical implications of the study will then be discussed. Finally, I will discuss the study's limitations and make recommendations for future research.

5.1 Research Question 1: Individual differences and L2 reading comprehension

The first research questions inquired about the contributions of individual differences to L2 reading comprehension and the interrelationships of these variables in a model of L2 reading. As hypothesized, French proficiency and English reading ability made substantial, direct contributions to reading comprehension in French. Together, these variables explained two-thirds of reading comprehension variance. The predictive power of L2 proficiency, however, was far greater, accounting for over 15 times more variance than L1 reading ability. Other individual differences made indirect contributions to L2 reading comprehension by contributing to other variables in the model. Metacognitive knowledge contributed as expected to L1 reading ability, but also made a significant though somewhat smaller contribution to L2 proficiency. Exposure to French also made an expected contribution to French proficiency. While motivation contributed to both L2 exposure and proficiency, its largest contribution was to L2 study habits. Nevertheless, these study habits did not predict French proficiency, and in fact had a negative but statistically insignificant relationship with this variable. Though anxiety's

relationships with L2 exposure and L2 proficiency were negative as expected, they were not significant. In fact, anxiety did not contribute significantly to any variables in the model except L2 study habits, where higher levels of anxiety were associated with more time and effort dedicated to French study. The model of individual differences including all these described variables accounted for 73% of variance in L2 reading comprehension.

5.1.1 L1 reading ability and L2 proficiency

The significant contributions of both L1 reading ability and L2 proficiency to L2 reading comprehension in the present study provide additional evidence that reading in another language is neither "a reading problem or a language problem" (Alderson, 1984, p. 1). Rather, reading in another language is a complex, multidimensional process involving both native and target language knowledge and skills. The relative contributions of these two variables in the present study also substantiate previous findings that target language proficiency, however, plays the much larger role in L2 reading (Bernhardt & Kamil, 1995; Bossers, 1991; Brisbois, 1995; Carrell, 1991; Lee & Schallert, 1997). This result supports interactive theories of reading, which underline the importance of language knowledge in word decoding, a necessary precondition for constructing meaning from text and connecting text meaning with other knowledge sources.

5.1.2 Metacognitive knowledge

Metacognitive knowledge's indirect contribution to L2 reading comprehension through both native language reading ability and target language proficiency validates previous findings on its role in the L2 reading process. That is, general knowledge about

texts and reading is implicated cross-linguistically in both L1 and L2 reading (Schoonen, et al., 1998). Participants in the present study, who with few exceptions began their French studies as adolescents or adults and who reported reading very infrequently in French, had undoubtedly developed the bulk of their knowledge about texts and reading strategies when reading in English. Yet, the metacognitive knowledge they had developed through L1 experiences also contributed to their L2 knowledge and skills.

Given that metacognitive knowledge specific to texts and reading was measured in the present study, this contribution to general L2 proficiency was not hypothesized. However, it is not an entirely unexpected result given that language proficiency was assessed using measures of not only L2 knowledge (vocabulary and grammar) but also L2 skills, which included reading. Clearly, metacognition about texts and reading would be implicated in the measures of reading skills included in the French proficiency test. It is also possible, however, that certain types of strategic knowledge measured by the reading metacognition questionnaire are related to strategies that foster the development of other types of L2 knowledge. For example, the strategy of inferring word meaning from context cues likely facilitates vocabulary knowledge as well as reading skills.

The supporting role played by metacognition also supports interactive views of L2 reading, which maintain that both linguistic knowledge and other sources of knowledge are implicated in the reading process. This was confirmed in the present study, where readers used both knowledge of French (L2 proficiency) and knowledge of texts and reading to construct meaning from the reading passages.

5.1.3 L2 exposure

Exposure to French contributed to French proficiency in the present study. The time that students spent in contact with French through speaking, reading, media, study abroad and other experiences made positive, significant contributions to their language skills. This result supports connectionist theories of language acquisition, which maintain that L2 exposure facilitates L2 development.

The indirect contribution of L2 exposure to L2 reading through language proficiency also provides additional evidence that exposure to oral language improves reading performance. In the present study, students' extracurricular French contact was overwhelmingly with oral language, yet even this contact contributed (albeit indirectly) to reading comprehension scores.

5.1.4 L2 study habits

It was hypothesized that learners' L2 study habits, a measure of motivational intensity, would make positive contributions to L2 proficiency, and thus to L2 reading comprehension. Study habits were measured using self-reports of time students studied for French relative to other courses and their persistence in completing French homework. However, study habits' contributions to language proficiency were not significant, and quite unexpectedly, the relationship of these two variables was negative: the more students reported studying French and doing homework, the poorer their actual French performance.

One explanation for this counterintuitive result may lie in the fact that the questions assessing study habits in the present study focused more on the quantity of time students spent on French study than on its quality. Plant, Ericsson, Hill and Asberg

(2004) explain the absence of reliable relationships between study habits and academic outcomes within the framework of "deliberate practice", proposing that only highly focused, deliberately planned study time promotes achievement. In a study examining the effects of study time and study quality on college grade point average (GPA), the researchers found that students who reported studying in distraction-free environments had significantly higher GPAs than those who did not, and that study environment was a significant predictor of GPA. Study time, in contrast, only predicted GPA when study environment and previous academic achievement were controlled for, and often lower achievers reported spending much more time studying than students with higher grades. Future L2 research examining the predictive capacity of study habits, therefore, should include measures of study quality as well as quantity.

5.1.5 Motivation

Motivation was conceptualized in the present study as a three-factor construct, composed of intrinsic, extrinsic and amotivation orientations. This model is consistent with the theoretical framework adopted in L2 research most notably by Noels et al. (1999; 2000). Confirmatory factor analyses provided support for this three-factor motivational model.

Given Mori's (2004) findings of componential differences between motivation for L2 study and for L2 reading, it was initially expected that these two types of motivation would emerge as separate factors in the motivation model. However, confirmatory factor analyses did not show that motivation for L2 study and for L2 reading were distinct constructs. In other words, students' reasons for studying French were not significantly different than their reasons for reading in French. This result may be explained by the fact

that most participants' L2 reading experiences were related to their French classes. Overall, students reported spending a negligible amount of time (less than 25 minutes per week) reading in French outside of class, with nearly half reporting that they never do so. It seems likely, then, that participants viewed reading in French as part and parcel of studying French, and their motivations for engaging in both activities were therefore indistinguishable. In contrast, Mori (2004) measured motivation to read as it related to a specific, self-directed extensive reading activity that students performed outside of class.

Motivation contributed indirectly to L2 reading comprehension in the present study through contributions to L2 exposure, and to a lesser extent, L2 proficiency. Motivation's largest contribution was to study habits, though as described in section 5.1.4 above, these habits did not predict either French proficiency or reading comprehension. These findings support Dörnyei and Kormos' (2000) assertion that motivation "is the antecedent of the action rather than achievement" (p. 281). Though motivation may not be directly predictive of particular L2 outcomes, it plays a fundamental role in their eventual attainment by triggering more proximally-related behaviors. In the present study, these behaviors included engaging in activities involving the target language and devoting time and effort to French study, though only the former contributed to target language proficiency and in turn to L2 reading performance.

5.1.6 Anxiety

Contrary to expectations, anxiety was not a significant predictor of either language exposure or proficiency. Although non-significant, relationships between anxiety and both L2 exposure and L2 proficiency were negative: higher levels of anxiety were associated with less contact with French and lower French proficiency. The

direction of this relationship is consistent with the preponderance of L2 anxiety research, which has found that anxiety plays an inhibitive rather than facilitative role in the development of L2 skills.

A possible explanation for the absence of any significant contributions of anxiety to L2 outcomes is suggested by a line of research conducted by Ganschow, Sparks and associates (Ganschow & Sparks, 1996; Ganschow, et al., 1994; Sparks & Ganschow, 1991). These researchers dispute the notion that anxiety is the cause of poor language performance, proposing instead that the reverse is true: poor language skills cause learners to become anxious about using them. Although this hypothesis was not tested in the present study, future research involving linguistic and affective variables may wish to take this possibility into account.

Anxiety's only significant contribution in the present study was to L2 study habits. Anxious students reported studying more, yet more study time did not predict better performance, mirroring Horwitz, et al.'s (1986) observation that anxiety may motivate unproductive "overstudying".

5.2 Research Question 2: Text genre and L2 reading comprehension

The second set of research questions asked about the role of text genre in L2 reading comprehension. More specifically, they asked about differences in reading comprehension due to genre (narrative or expository), whether differences in the comprehension of each genre existed by learner level, and about the contributions of individual differences to comprehension of each genre.

5.2.1 Research Question 2a: Genre effects on L2 reading comprehension

As hypothesized, participants comprehended significantly more from the two narrative passages than from the expository texts, and genre had a significant and very large effect on reading comprehension. There was however, a significant interaction between genre and text, indicating differences in recall comprehension scores by text within each genre. Students recalled almost exactly the same percentage of propositions from both narrative texts, however, they recalled significantly less from Expository Text 2 than from Expository Text 1. Nevertheless, comprehension scores were significantly higher for both narrative texts than for either of the expository passages.

The superior comprehension outcomes for narrative texts in both the pilot and present studies provide evidence that as in one's native language, narratives are more comprehensible in the L2 than expository texts. These findings are consistent with L1 reading research, which has consistently pointed to an advantage for narrative texts. In both studies, however, an interaction between genre and text was present, indicating different comprehension outcomes for the two expository texts. In both cases these differences are likely attributable to text characteristics that were not adequately controlled for. In the pilot study, significantly more was comprehended from Expository Text 2 than Expository Text 1. A post hoc analysis revealed that this passage in fact contained a narrative-like description from which significantly more was recalled than was from the remainder of the text. The passage was therefore replaced in the present study with one that contained no such narrative elements. However, the replacement text, although equivalent to the other texts in length and measures of lexical and grammatical complexity, contained 22-32% more semantic propositions than the other texts. Since

there was simply more to remember from this text than the other passages, it is therefore possible that participants' failure to recall as much from this text is explained more by the additional cognitive demands it imposed than by its genre.

These interactions, nonetheless, should not call the results on the relative comprehensibility of the two genres into question. To the contrary, the fact that significantly more narrative-like propositions were recalled from Expository Text 2 in the pilot study seems to strengthen the conclusion that narrative text structures aid comprehension in the L2. The patterns of comprehension scores obtained for the narrative texts and the remaining expository text in both studies (narrative scores roughly 50% higher than scores for the expository text) also suggest an advantage for narrative texts. Moreover, the relative effect sizes of genre and text in the present study, with more than a three times greater effect for genre than text, indicate that the genre of text that was read was implicated much more in comprehension than the text that was read.

5.2.2 Research Question 2b: Genre and level in L2 reading comprehension

It was further hypothesized that learners at all levels of instruction (beginning, intermediate, advanced) would comprehend more from the narratives than the expository passages. However, given evidence that L2 proficiency affects the amount of attention readers can allocate to global text features (Chen & Donin, 1997; Horiba, 1990), it was expected that differences in comprehension scores by genre would be greater among advanced learners than either intermediate or beginning learners, and greater among intermediate level learners than beginners. Results confirmed these hypotheses, providing evidence suggestive of a linguistic threshold for genre. That is, below a certain level of language instruction, readers may be less able to successfully exploit the cues that

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facilitate narrative comprehension. An alternative explanation of this result, however, may be that the participants' exposure to the narrative genre in French increased as they progressed in their French studies. Advanced-level participants were enrolled in upper-level content courses requiring regular and abundant reading in French, and nearly half were taking classes focusing on the reading and interpretation of narrative, literary texts. While some narrative readings were included in the intermediate-level curriculum at the time the study was conducted, intermediate students had far less exposure to narratives than advanced students. The beginning-level curriculum, on the other hand, provided almost no opportunities for students to read narrative texts in French. Because exposure to and familiarity with each genre in French were not controlled for in the present study, definitive conclusions about a genre threshold cannot be drawn from these results.

5.2.3 Research Question 2c: Genre and individual differences

A final genre-related research question inquired about the contributions of individual difference variables to comprehension of each genre of text. It was expected that linguistic knowledge and skills (i.e., L1 reading ability and L2 proficiency) would play a lesser role in narrative comprehension than in expository text comprehension. This hypothesis was only partially confirmed. Though both variables did make larger contributions to expository text comprehension, this difference was only significant for the contribution of L2 proficiency. In other words, less French proficiency was needed to comprehend the narrative genre than the expository genre. This result provides additional evidence of the narrative genre's facilitative role in text comprehension.

5.3 Research Question 3: Genre and text reactions

A third set of research questions examined participants' affective reactions to reading narrative and expository texts in the L2 in general, and their reactions to reading each of the four experimental texts. Concerning genre, it was expected that learners at all levels would report greater enjoyment of narrative texts and therefore would report an overall preference for reading narratives, but would view the expository genre as more useful. It was further hypothesized that participants would find the narrative genre more comprehensible and less anxiety-provoking. It was also expected that advanced learners would have more positive affective reactions and less anxiety than lower-level learners related to texts of both genres, but that this difference would be more pronounced for the narrative genre. Students' reactions to the four experimental passages were also expected to vary by genre, with similar patterns of reactions as described above (greater enjoyment, better comprehensibility, and less anxiety for the two narrative texts; greater utility value for the two expository texts). However, reactions were also expected to vary by text within each genre.

The hypotheses related to genre reactions were for the most part confirmed. Students of all levels reported that they enjoyed reading the narrative genre more than the expository genre in French, and if they had a choice would rather read narrative texts. These results seem reflective of one of the primary communicative intents of the narrative genre, affective engagement of the reader, and point to a relationship between readers' affective engagement and preferences. As expected, students also found the narrative genre more comprehensible than expository texts in the L2, which mirrored actual reading comprehension outcomes by genre in the present study. Narrative texts

were also perceived as less anxiety-provoking than expository texts. This inverse relationship between anxiety and perceptions of comprehensibility was expected given previous research associating beliefs about reading difficulty with reader anxiety (Saito et al., 1999). What was unexpected, however, is that students did not find reading expository texts significantly more useful than reading narratives in the L2, despite the fact that the expository genre is more closely associated with the practical purpose of obtaining information. One possible interpretation of this result is that students associated all reading in French with their French studies, an explanation supported by the relatively small amount of time that students reported reading in French outside of class. Students might therefore have considered reading texts of either genre useful and necessary for completing assignments, meeting course objectives, and/or developing language skills. Given that students reported enjoying the narrative genre more, it is also possible that they associated greater levels of enjoyment with utility value. Students may believe that being entertained by a text is a useful reason for reading it, a notion that, after all, is at the heart of reading for pleasure.

As hypothesized, genre reactions varied significantly by learner level, with advanced students reporting the greatest enjoyment, utility and comprehensibility and the least anxiety for both genres. These results were expected given that advanced students were enrolled in upper-level content courses that require extensive reading in French, whereas beginning and intermediate students had little relative experience reading in their French classes. As expected, positive perceptions of the narrative genre were more pronounced for advanced students. Again, these perceptions were likely fostered by advanced students' experiences, since the majority of these students were enrolled in

classes focusing on literary interpretation. Lower-division students, on the other hand, had less experience on which to base their assessment of this genre. These results suggest that the benefits of increased language exposure may not only be linguistic, but also affective.

The only significant difference between beginning and intermediate learners' reactions to each genre was in perceptions of comprehensibility. Beginners believed narrative texts were less comprehensible than intermediate-level students did, though there was no difference between beginning and intermediate students' perceived comprehensibility of the expository genre. This result also appears to reflect beginners' relative inexperience reading narrative texts, considering that at the time the study was conducted the beginning-level curriculum included no narrative readings, but that the intermediate-level curriculum included some narrative texts. In contrast, both beginning and intermediate students were required to read expository, cultural-informational passages in their French classes.

Hypotheses about students' reactions to the four experimental reading passages were confirmed. Students reported enjoying the narrative texts more, understanding them more, and experiencing less anxiety when reading them, but they believed the two expository texts were more useful to read. With the exception of this judgment about the texts' utility, these results mirrored their reactions to each genre in general. Differences in perceptions of utility for the expository genre in general and for the two expository passages read in the study may be explained by differences in students' purposes for L2 reading in general and for performing the reading tasks in the present study. As previously discussed, participants' French reading experiences and therefore their

exposure to different text genres were largely related to their French classes. Consequently, students may have found all L2 reading useful regardless of text genre in order to meet class requirements. In the present study the reading tasks were not tied to such goals, and readers therefore may have perceived the expository texts that they read as more related to the useful purpose of acquiring information.

Within each genre, however, there was much variability in students' reactions to the individual texts. This wide range of reactions was evidenced by the significant effects of text on all the affective dimensions under investigation, as well as the range of student comments that each text elicited. Therefore, while genre may play a role in students' reactions to a particular text, it is certainly not the sole factor determining their perceptions. Participants' comments suggested that other text characteristics including personal engagement with the topic, text organization, salience of text details, and word and sentence-level features also affected their reading experience.

5.4 Methodological implications

The present study sought to contribute to L2 reading and individual differences research using several methodological innovations. First, questionnaires for assessing motivation and affective reactions to L2 study and L2 reading were developed by adapting items used in existing research instruments (Mori, 2004; Kondo-Brown, 2006; Yamashita, 2004). Internal consistency estimates and confirmatory factor analyses indicated that these new questionnaires were reliable measures of the constructs under investigation, including intrinsic and extrinsic motivation, amotivation, anxiety and motivational intensity (L2 study habits). These questionnaires may be useful in future

research on L2 motivation and affect, especially since they measure a broad range of motivational and affective orientations related to L2 study and L2 reading. Instruments assessing affective reactions to text genre and to reading particular texts were also developed based on text-related comments solicited in the pilot study. Estimates of internal consistency indicated that the subscales assessing enjoyment/interest, perceptions of comprehensibility and of utility of texts and text genres were reliable measures of these constructs. These instruments could contribute to future research on the effects of affective reactions to texts and genres to reading comprehension outcomes.

In contrast to most L2 individual difference research that has involved students at only one level of instruction, this study used a cross-sectional approach in order to examine individual difference variables among learners ranging from beginning to advanced levels. This approach should allow results to be generalized to more diverse populations instead of to only one level of learner. This methodology also provided new insights into L2 reading outcomes by text genre and in differences in affective reactions to text genre by different learner levels.

This study also used a multi-componential approach in order to identify the relative contributions of a variety of individual difference variables to L2 reading comprehension. This approach resulted in a greater amount of L2 reading comprehension variance (73%) accounted for than generally has been the case in single-focus studies (Bernhardt, 2005). The multi-componential design, as well as the use of structural equation modeling techniques, also allowed for both direct and indirect effects of individual difference variables on reading comprehension variables to be identified.

Some methodological limitations of this study stem from sample size and the requirements of structural equation modeling approaches. While 153 participants would be considered large compared to samples in many other empirical L2 reading studies, this number is on the low end of the sample size required for SEM techniques. This minimal sample size appears to explain at least in part the failure of one of the affective variables that was initially measured, self-perceived ability, to fit into an admissible model of individual differences. This may also have been explained by the fact that the questionnaire items measuring self-perceived ability did not tap enough dimensions of this construct to allow reliable assessment of this variable. Future studies using SEM approaches should therefore include larger sample sizes and a greater number of observed indicators to measure such latent variables.

5.5 Pedagogical implications

Although the present study was not intended to test particular pedagogical interventions, its results nonetheless may have practical implications for L2 reading instruction.

While this study provided evidence that a portion of students' potential for L2 reading success is predetermined by their native language reading ability before they even enter the classroom, ultimately it was found that their ability to read in another language is much more dependent on their target language proficiency. This result should be encouraging for language educators, who aim to help students develop L2 knowledge and skills through language study.

The relationships revealed between metacognitive knowledge and L2 proficiency, and in turn L2 reading outcomes, point to potential linguistic benefits of helping students develop knowledge of texts and reading strategies. This knowledge can be fostered through pre-reading activities that focus on metacognitive awareness as well as explicit metacognitive strategy training (Carrell, 1989; Carrell, 1998; Tang, 1992). The fact that participants reported knowledge of less than half the reading strategies identified in the metacognition questionnaire also suggests that a need exists for strategy awareness training at the college level.

The present study also confirmed the important facilitative role of target language exposure in L2 learning and reading. Language educators should seek to exploit these frequency effects by maximizing students' opportunities for target language contact both in and out of the classroom. Extensive reading programs, as described by Bamford and Day (2004), and book flood programs, as described in section 2.1.2.2, have been shown to be effective means of increasing learners' exposure to written language within the L2 curriculum. The fact that students of all levels reported spending so little time reading in French (10 minutes per week for beginning and intermediate students, 45 minutes per week for advanced) indicates a need for additional L2 print exposure among this population. Providing incentives for students to seek other types of target language experiences outside the classroom also seems key to improving both language and reading performance.

The counterintuitive finding of a negative relationship between L2 study habits and language outcomes has important implications for language students and educators. First, students should be made aware that increasing study time may be less effective than

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increasing study quality. It is also relatively common for language instructors to recommend prescribed amounts of study time to their students, typically one to two hours for every hour spent in class (Monmouth College; Seattle Language Academy, University of Wollongong). This type of "one size fits all" prescription is clearly inadequate. This is not to suggest, of course, that students be discouraged from spending time studying. Rather, they should be encouraged to make the most productive possible use of study time, and should receive instruction in the language study skills necessary to achieve this goal. Haggstrom (1993) and McDevitt (1997) provide recommendations on effective study skills and study-skill training for language students.

The role of individual affective differences in L2 learning and reading also should not be ignored in the classroom. The present study shows that motivation plays a substantial role in shaping behaviors that subsequently influence reading comprehension. Instructors should attempt to create motivating reading environments in order to enhance students' reading performance. The inclusion of interesting, relevant and engaging reading materials in the curriculum is an important component of such an environment. Because pleasing all readers all of the time is a near-impossible task, educators should consider introducing reading activities that take student preferences and choice into account, such as free reading or extensive reading, in order to foster student motivation.

Since the majority of this study's participants indicated they were studying French to meet a degree requirement other than a French major or minor, it would be expected that their primary motivation for language study would be extrinsic, and that high levels of amotivation would be reported. Yet overall, participants reported similar levels of intrinsic and extrinsic motivation for L2 study, as well as low levels of amotivation. This

motivational profile of students who otherwise may not have chosen to study a language should be encouraging to educators at institutions with language requirements. Classifying students who are meeting a language requirement as "unmotivated" may unwittingly discourage otherwise motivated learners from effort and subsequent achievement, if not future foreign language study.

While similar motivational patterns were observed between motivation for L2 study and L2 reading, it should be noted that overall students were less motivated to read in French than to study French. Making such students aware of the real-life purposes and benefits of reading in another language (developing linguistic and cultural competency, developing critical thinking skills through text interpretation, and gaining insights into the human condition, among others) and providing them with incentives to read within the language curriculum may help foster their reading motivation.

Although anxiety did not have any significant effects on language proficiency in this study, it had the undesirable result of pushing students to study more without any corresponding gains in French proficiency. Language instructors and learners alike should be aware of this anxiety-related phenomenon, and instructors should promote more productive uses of L2 study time, especially among anxious students.

The superior reading comprehension outcomes for narrative texts in the present study should help refute beliefs that this genre is the most problematic for language students, and provide support for including narratives in L2 reading curricula. This study also provides evidence to challenge the claim that narrative, literary texts are inappropriate for beginning-level learners. Although beginners were less able to take advantage of the genre-level features that promote narrative comprehension than more

advanced learners, they nonetheless understood more from the narrative texts than from the expository passages. Furthermore, L2 proficiency was a less important predictor of comprehension of the narrative genre than the expository genre. These findings provide support for including narrative reading activities at all levels of language instruction. They further suggest that lower-division students may require additional instructional support to help them exploit genre-level cues when reading both genres. Grabe and Stoller (2002) provide a range of suggested activities to call attention to such text features, including pre-reading activities focusing on genre, creating visual representations of text structure, and teaching signal words common to the genre.

Readers' affective reactions to each genre also have implications for L2 reading curriculum and instruction. Mori's 2004 study provides evidence that enjoyment and interest in reading materials affects the amount that students will read; lack of interest and enjoyment motivate students to read less. Selecting reading materials for the L2 classroom from genres and texts that engage students is therefore an important first step in encouraging them to read. In the present study, students of all levels clearly preferred the narrative genre as well as the two experimental texts that represented this genre. This provides an additional, compelling reason to include narrative texts in the L2 reading curriculum at all levels of instruction.

5.6 Limitations

The present study is subject to several limitations. First, it cannot be ruled out that the weaker recall comprehension scores for Expository Text 2 were influenced by the fact

that it contained a greater number of semantic propositions than the other three texts, imposing an additional cognitive load that may have hindered text recall.

As in any experimental study, there are also limitations in generalizability to more naturalistic settings. For example, the reading and recall tasks in the present study likely do not represent classroom-based reading, where comprehension may be aided by activities that connect the text with learners' background knowledge or by text glosses. Indeed, the relatively low percentage of propositions that participants recalled in both the pilot and present studies may reflect this limitation. In this experiment, texts were also chosen for their lack of unfamiliar topics or culture-specific references. In the L2 classroom, however, texts are often chosen for instructional purposes precisely because they contain new information or unfamiliar cultural scenarios.

It is also important to note that the results related to motivation and affective reactions to genre may have limited generalizability from this foreign language context to second language settings. Motivational profiles for students studying in a target language environment likely differ from those studying another language in their home country. Students who are immersed in the target culture are expected to have different reasons for reading each genre of text than those who have little need to read in the L2 outside the classroom, and their affective reactions to each genre would therefore be likely to differ.

Finally, although the present study accounted for a hefty amount of reading comprehension variance (73%), it leaves a substantial amount unexplained. This additional variance may be explained by other cognitive and non-cognitive factors that were not measured in the present study (see section 5.5 below).

5.5 Directions for future research

The present study opens several possible avenues for future inquiry. Concerning individual differences, including additional variables in the model identified here may account for remaining unexplained variance in L2 reading comprehension. These might include cognitive factors such as working memory and intelligence, and non-cognitive factors such as personality, willingness to communicate, and creativity (Dörnyei, 2005). In light of evidence of relationships between affective reactions to reading and reading outcomes (Brantmeier, 2005; 2006), future studies may also wish to examine the predictive role of these variables in a model of reading comprehension. Longitudinal studies of individual differences in reading comprehension may also be able to identify how these variables contribute to changes in reading skills over time.

Future text genre research may wish to investigate reading outcomes for other commonly read text genres or subgenres (for example, poems, plays, argumentative or procedural texts). The predictive role of affective reactions to genre and text in L2 reading comprehension should also be explored, as well as the text-based factors identified in participant comments, including personal engagement with the topic, text organization, salience of text details.

5.6 Conclusion

L2 reading remains a complex, multidimensional process where both reader and text-based variables interact. By providing additional insights into the relationships between a variety of these reader-based differences and into the effects of the text-based variable of genre, it is hoped that this study's results contribute to the understanding of

the L2 reading process. It is further hoped that the findings related to text genre will encourage the early and frequent inclusion of narrative texts in addition to expository texts in the L2 curriculum.

Texts and English Translations

Narrative Text 1: Les trois motocyclistes

Au cours d'un été nous campions au bord d'un lac canadien. La nuit était tombée,

nous avions dîné. Nous étions neuf en tout : six adolescents, Jean-Pierre, moi, Dorothée

qui avait douze ans. J'avais sommeil. Je les ai laissés autour du feu et je suis allée dans la

tente.

Pendant que je me préparais à me coucher j'ai entendu une pétarde formidable.

Nous campions dans le creux d'une grande dune de sable qui descendait jusqu'à l'eau. Je

suis sortie et j'ai vu un spectacle incroyable : trois puissantes motocyclettes qui

absorbaient la pente raide de la dune dans des geysers de sable et un cataclysme de bruit.

La panique m'a prise. Je croyais que c'était la police qui venait faire éteindre notre feu,

ou Dieu sait quoi. Ce n'était pas la police mais trois jeunes hommes, dans les vingt-deux

ans, secs, habillés de cuir noir, avec de gros dessins colorés sur leurs blousons. Les

machines étaient magnifiques, les flammes faisaient briller leurs chromes par éclats, les

garçons étaient effrayants, dangereux, les yeux froids dans des visages bardés de casques

et de mentonnières. J'étais en retrait, je voyais la scène. Je m'attendais au pire. Jean-

Pierre avait fait un pas vers eux.

« Hello, good evening. »

Pas de réponse. Ils sont venus près du feu. Tout le monde était debout. Cela a duré

un moment. Puis les enfants ont commencé à s'asseoir. Les trois motocyclistes aussi.

Grégoire a pris son banjo, Alain sa guitare. Ils se sont mis à gratter. Les trois

motocyclistes ont souri. On a passé des oranges. Alors a suivi une des soirées les plus

intéressantes que j'aie vécues ces dernières années.

Narrative Text 1 Translation: The Three Motorcyclists

One summer we were camping on the shores of a Canadian lake. Night had fallen,

we had eaten dinner. There were nine of us in all: six teenagers, Jean-Pierre, me, and

Dorothée who was twelve. I was sleepy. I left them around the fire and I went into the

tent.

While I was getting ready for bed I heard an enormous backfire. We were

camping at the top crevice of a big sand dune that sloped down to the water. I came out

and saw an unbelievable spectacle: three powerful motorcycles that were absorbing the

steep slope of the dune in geysers of sand and a cataclysm of noise. Panic seized me. I

thought it was the police who had come to make us extinguish our fire, or God knows

what. It wasn't the police but three young men, about twenty-two years old, dressed in

black leather, with huge designs colored on their jackets. The machines were

magnificent, the flames made their chrome shine in flashes, the boys were frightening,

dangerous, cold eyes in faces clad in helmets and chinstraps. I was in retreat, I was

watching the scene. I was expecting the worst. Jean-Pierre stepped towards them.

"Hello, good evening."

No answer. They came close to the fire. Everyone was standing up. That lasted

for a moment. Then the children started to sit down. The three motorcyclists, too.

Grégoire picked up his banjo, Alain, his guitar. He started to strum. The three

motorcyclists smiled. We passed around oranges. And so followed one of the most

interesting nights I've experienced in these last few years.

Narrative Text 2: L'œuf de Pâques

Il s'appelait Siméon Farfelu. Sa femme s'appelait Nadine.

Ils se sont connus il y a dix-sept ans, exactement le 12 mai 1932. Le jour de Pâques, ils s'étaient trouvés sur un sentier dans les Bois de Boulogne. Il lui avait demandé de lui tourner le dos et s'en était aller cacher un œuf en chocolat dans un buisson. Elle l'avait cherché, trouvé et avait mordu le chocolat. À l'intérieur, un morceau de papier sur lequel était écrit « je t'aime ». Elle s'était jetée à son cou et l'avait couvert de baisers.

Depuis ce temps, chaque année, le jour de Pâques, Siméon Farfelu cachait un œuf dans la maison ou dans le petit jardin. Nadine, dès le réveil, se mettait à chercher partout et Siméon la suivait avec un regard amusé.

Quand elle avait enfin trouvé, comme la première fois, elle mordait hardiment dans le chocolat pour savoir ce que l'œuf cachait. Le plus souvent, elle y avait trouvé un bijou. À plusieurs occasions, elle avait trouvé des bouts de papier sur lesquels elle lisait : « Bon pour une robe » ou « Bon pour une surprise. »

L'année précédant celle dont il est particulièrement question dans cette histoire, Nadine Farfelu avait peut-être été un peu déçue. Siméon, très occupé par ses affaires, ne s'était pas donné la peine de chercher une cachette difficile. Nadine avait trouvé l'œuf après cinq minutes dans la casserole où elle devait faire bouillir le lait.

Elle avait mordu et elle avait vu…un billet de cent francs.

Narrative Text 2 Translation: The Easter Egg

His name was Simon Scatterbrained. His wife's name was Nadine. They met seventeen years ago, exactly on May 12, 1932. On Easter, they found themselves on a

path in the Bois de Boulogne. He asked her to turn her back and went to hide a chocolate egg in a bush. She looked for it, found it, and bit into the chocolate. Inside was a piece of paper on which was written "I love you." She threw her arms around his neck and covered it with kisses.

Since that time, every year on Easter, Simon Scatterbrained would hide an egg in the house or in the little yard. As soon as she got up, Nadine would start looking for it everywhere and Simon would follow her with an amused look.

When she had finally found it, like the first time, she bit hard into the chocolate to find out what the egg was hiding. Most often, she found jewelry. Several times, she found pieces of paper on which she read "Good for a dress" or "Good for a surprise".

The year before the one that is the subject of this story, Nadine Scatterbrained had been a little disappointed. Simon, very busy with his work, hadn't gone to a lot of trouble to find a difficult hiding place. Nadine had found the egg in the pan she used to boil milk.

She bit into it and she saw...a one hundred franc note.

Expository Text 1: Le café dans la vie des étudiants

Dans la vie sociale des étudiants français, le café joue un rôle important. Le temps important que tant d'étudiants passent au café, peut apparaître comme une « perte de temps ». Il répond, à vrai dire, en grande partie, à tout un ensemble de besoins que l'étudiant cherche à satisfaire, en dehors du temps consacré au travail. Aller au café, ce n'est pas uniquement chercher un refuge entre deux cours quand la bibliothèque est pleine, ou éviter un déplacement lorsqu'on habite une chambre éloignée de la Faculté, ou trop exiguë, ou mal chauffée, ou encore coûteuse à chauffer. Il semble que le café réponde avant tout à un besoin de contacts que les structures universitaires n'ont pas

satisfait jusqu'à maintenant. Le café est bien souvent le seul lieu où fuir la solitude, où nouer des connaissances et faire des amis.

Les plus esseulés vont toujours au même café. Ils se sentent un peu chez eux, ils prennent plaisir à retrouver les mêmes habitués, à être traités amicalement par les garçons. À l'âge où les relations amicales ou amoureuses commencent à prendre plus d'importance que les relations familiales, les étudiants apprécient tout ce que peut leur apporter l'ambiance d'un café familier. L'amitié, la camaraderie, ne peuvent pas se trouver dans la famille. Au café, on n'est pas forcé de répondre à tous les appels. Ça détend, on est entre jeunes, c'est mieux que d'être en famille.

Au café, l'étudiant devient un être sociable. Il goûte l'imprévu des rencontres, qu'elles soient de peu d'importance ou marquantes.

Expository Text 1 Translation: The Café in Student Life

The café plays an important role in the social life of French students. The important time that so many students spend in cafés may seem like a "waste of time". In truth, it responds in an important way to a variety of needs that the student is looking to satisfy outside of time devoted to study. Going to a café is not only looking for a refuge between classes when the library is full or avoiding the need to go back a room that's far away from the university, or cramped, or poorly heated, or expensive to heat. It seems that the café responds above all to a need for contact that the university hasn't satisfied until now. The café is often the only place to flee solitude, to strike up acquaintances and make friends.

The loneliest ones always go to the same café. They feel at home, they take pleasure in seeing the same regulars there, in being treated in a friendly way by the

waiters. At the age where friendships and romances are starting to become more important than relationships with family, students appreciate everything that the environment at a familiar café offers. Friendship and camaraderie can't be found with your family. At a café, you don't always have to answer the phone. It's relaxing, you're with other young people, it's better than being with your family.

At the café, the student becomes a sociable being. He experiences random encounters, be they of little importance or significant.

Expository Text 2 (Pilot Study): La vague bouddhiste

Comme chaque matin depuis bientôt trois ans, dans son studio parisien où il vit seul, François se lève à l'aube. Après une douche rapide, il enfile un pantalon du jogging pour faire *zazen*, la méditation assise silencieuse du bouddhisme zen. Il s'assied en tailleur sur un *zafu*, un coussin rond et épais face au mur. Le dos parfaitement droit, les deux mains jointes en contact avec l'abdomen, les yeux mi-clos, il porte son attention sur sa respiration, longue et profonde.

François fait partie des dizaines de milliers de Français venus au bouddhisme par la méditation. La plupart de ces nouveaux adeptes ont, comme lui, entre 30 et 45 ans, sont des citadins célibataires ou vivent en concubinage. Comme François, ils ont fait des études supérieures. Ils sont, eux aussi, cadres ou exercent une profession libérale. Depuis peu, le bouddhisme commence à s'étendre à toutes les couches de la population. Il devient l'un des phénomènes spirituels les plus étonnants de notre société, en cette fin de XXe siècle.

À la question « Quelle est la religion qui a votre préférence ? » 2 millions de Français répondent : « Le bouddhisme. » Plus surprenant encore, la religion du Bouddha

vient au troisième rang, loin derrière le catholicisme (68%), mais presque à l'égalité avec le protestantisme (6%). Dans un classement où l'on peut citer trois religions par ordre d'intérêt décroissant, le bouddhisme obtient les suffrages de 6 millions de Français. C'est aussi la première fois que le bouddhisme apparaît dans un sondage d'opinion sur les croyances des Français.

Expository Text 2 Translation (Pilot Study): The Buddhist Wave

Like every morning for nearly three years, in his Parisian studio apartment where he lives alone, François gets up at dawn. After a quick shower, he slips on some jogging pants to do *zazen*, the silent seated mediation of Zen Buddhism. He sits cross-legged facing the wall on a *zafu*, a round, thick cushion. His back perfectly straight, his two hands joined over his abdomen, his eyes half closed, he focuses his attention on his breathing, long and deep.

François is part of tens of thousands of French people who came to Buddhism through meditation. Most of these new followers, like him, are between 30 and 45 years old, single city-dwellers or living with a partner. Like François, they are college-educated. Also, they are in management or are professional people. Recently, Buddhism has started to spread to all levels of the population. It is becoming one of the most stunning spiritual phenomena of our society at the end of the 20th century.

In response to the question "Which religion do you prefer?" 2 million French people respond "Buddhism". Even more surprising, the religion of Buddha comes in third place, well behind Catholicism (68%), but almost equal to Protestantism (6%). In a ranking of the three religions by decreasing order of interest, Buddhism receives the votes

of 6 million French people. This is also the first time that Buddhism has appeared in a public opinion poll about the beliefs of French people.

Expository Text 2 (Present Study): Sport: l'homme sans limites

Plus vite, plus haut, plus fort. Depuis la fin du XIXe siècle et la rénovation des Jeux olympiques par le baron Pierre de Couvertin, une loi régit le sport moderne : toujours plus, toujours mieux. Grignoter des secondes, des centimètres. Le Moyen Âge a inventé l'horloge mécanique et ainsi discipliné le temps. Aujourd'hui, c'est le syndrome du record – il occupera encore tous les esprits pendant les 22e Jeux olympiques. Plus de 15 000 sportifs vont tenter de dépasser leurs limites. Quelques autres essaieront d'aller au-delà des « limites naturelles ». Mais jusqu'où iront les champions ? D'ailleurs, ces limites, existent-elles vraiment ?

Le stade, la piscine ou le gymnase sont devenus de centres de recherche. Les sportifs de haut niveau se gavent à la haute technologie. Avec un masque d'oxygène sur le visage ou un casque-caméra sur la tête. Et, sur le bord des pistes ou des bassins, on teste. On mesure. Tout. Toujours. Le potentiel métabolique. La consommation maximale d'oxygène. La vitesse d'impulsion. L'amplitude de la foulée. Des escrimeurs répètent leurs coups favoris sur l'Armivex, un panneau métallique hexagonal portant six petites cibles circulaires munies d'une ampoule en leur centre : dès que l'une s'allume, l'athlète doit la toucher. Et un ordinateur calcule son temps de réaction.

L'évolution du matériel et de la technique est aussi directement liée à la haute technologie. Aujourd'hui, le moindre geste sportif est décortiqué, décomposé, analysé par les ordinateurs des scientifiques. Ainsi, lorsqu'un nouveau geste, une nouvelle technique apparaissent sur le stade, dans le gymnase ou la piscine, ils ne doivent rien au hasard.

Expository Text 2 Translation (Present Study): Sports: Man without limits

Faster, higher, stronger. Since the end of the 19th century and the renovation of the Olympic games by Baron Pierre de Couvertin, one law governs modern sports: always more, always better. Gnawing off seconds, centimeters. The Middle Ages invented the mechanical clock and thus disciplined time. Today, it's the syndrome of the record – it will be on everyone's mind during the 22nd Olympic games. More than 15,000 athletes will attempt to surpass their limits. Some others will try to go beyond "natural limits." But how far will the champions go? Besides, do these limits really exist?

The stadium, the pool and the gym have become research centers. Athletes at the high levels will stuff themselves with high technology. With an oxygen mask on their faces and a helmet-camera on their heads. And, on the sidelines of the tracks or the pools, others test. They measure. Everything. Always. Metabolic potential. Takeoff speed. The length of the stride. Fencers repeat their favorite blows on Armivex, a hexagonal, metallic shield carrying six small circular targets equipped with a bulb in their center: as soon as one of them lights up, the athlete has to touch it. And a computer calculates his/her reaction time.

The evolution of equipment and technique is also directly tied to high technology. Today, the smallest sports movement is dissected, broken down, analyzed by scientists' computers. Thus, when a new movement, a new technique appears in the stadium, in the gym or in the pool, they leave nothing to chance.

Propositional Analyses of Texts

Narrative Text 1: The Three Motorcyclists

P1	2	camp [we]
P2	1	Canadian [lake]
P3	2	on-shores [P2]
P4	1	CON (one summer) [P1}
P5	2	fall/is [night]
P6	2	eat [we, dinner]
P7	2	is [nine]
P8	1	CON (in all) [P7]
P9	2	is [6 teenagers]
P10	2	is [Jean-Pierre]
P11	2	is [me]
P12	2	is [Dorothee, 12]
P13	1	CON (and) [P11, P12]
P14	2	is [me, sleepy]
P15	2	leave [me, them]
P16	2	around-fire [P15]
P17	2	go [me, tent]
P18	1	CON (and) [P15, P17]
P19	2	get ready [me, bed]
P20	1	CON (while) [P19]
P21	2	hear [me, P22]
P22	1	enormous/loud [noise]
P23	2	camp [we, P24]
P24	2	at top-crevice [P23]
P25	2	of big [dune]
P26	2	slope [*dune*]
P27	2	down to-water [P25]
P28	2	come out [me]
P29	2	see [me, P30]
P30	1	unbelievable [spectacle]
P31	1	CON (and) [P28, P29]
P32	2	absorb [P33, P35]
P33	1	three [motorcycles]
P34	1	powerful [*motorcycles*]
P35	1	steep [slope/dune]
P36	2	in-sand geysers [P32]
P37	2	in-noise cataclysm [P32]
P38	1	CON (and) [P36, P37]

P39	2	seize [panic, me]
P40	2	think [me, P41]
P41	2	is [police]
P42	2	come [*police*]
P43	2	make/cause [police, us]
P44	2	extinguish/put out [us, fire]
P45	1	CON (in order to) [P42, P43]
P46	2	know [God, what]
P47	1	CON (or) [P42, P46]
P48	2	is not [police]
P49	2	is [men, three, young]
P50	1	CON (but) [P49]
P51	2	aged/is [men, 22]
P52	1	CON (about) [P51]
P53	2	is [men, dressed]
P54	2	in-black leather [P54]
P55	1	color [designs]
P56	2	on-jackets [P55]
P57	2	is [machines/motorcycles, magnificent]
P58	2	make/cause [flames, P59]
P59	2	shine [chrome]
P60	2	in-flashes [P59]
P61	2	is [boys, frightening]
P62	2	is [boys, dangerous]
P63	1	CON (and) [P61, P62]
P64	2	is [eyes, cold]
P65	2	in-faces [P64]
P66	2	is [*faces*, clad]
P67	2	with-helmets [P66]
P68	2	with-chinstraps [P67]
P69	2	is [me, in retreat]
P70	2	watch [me, scene]
P71	2	expect [me, the worst]
P72	2	step/walk [Jean-Pierre]
P73	2	towards-*men* [P72]
P74	2	*say [Jean-Pierre*, "Hello, good evening"]
P75	2	not answer [*men*] / is not [response/answer]
P76	2	come [*men*]
P77	2	close to-fire [P76]
P78	2	is [everyone, standing]
P79	2	last [*standing*]
P80	1	CON (for a moment) [P79]
P81	2	start [children, sit down]

P82	1	CON (then) [P81]
P83	2	*sit* [men/motorcyclists]
P84	1	CON (too) [P83]
P85	2	pick up [Gregoire, banjo]
P86	2	*pick up* [Alain, guitar]
P87	2	start [*Alain/Gregoire*, strum/play]
P88	2	smile [men/motorcyclists]
P89	2	pass around [we, oranges]
P90	2	follow/happen [P91]
P91	1	interesting [night]
P92	1	CON [one of the most) [P91]
P93	2	experience [me]
P94	1	CON (last few years) [P93]
	163	

Narrative Text 2: The Easter Egg

P1	2	is [name, Simon Farfelu/Scatterbrained]
P2	2	is [wife, name, Nadine]
P3	2	meet [*Simon, Nadine*]
P4	1	CON (17 years) [P3]
P5	1	CON (ago) [P3, P4]
P6	1	CON (May 12, 1932) [P3]
P7	1	CON (exactly) [P6]
P8	2	find/be [*Simon, Nadine]*
P9	2	on-path [P8]
P10	1	CON (Easter) [P8]
P11	2	in-Bois de Boulogne [P8]
P12	2	ask [*Simon, Nadine, P13]*
P13	2	turn [*Nadine*, back]
P14	2	go [*Simon*]
P15	2	hide [*Simon*, P16]
P16	1	chocolate [egg]
P17	2	in-bush [P15]
P18	1	CON (and) [P14, P15]
P19	2	look [*Nadine, egg]*
P20	2	find [*Nadine, egg*]
P21	2	bite [*Nadine, chocolate/egg*]
P22	1	CON (and) (P20, P21]
P23	2	is [paper, written, "I love you"] / says [paper, "I love you"]
P24	2	inside-*egg* [P23]
P25	2	throw [*Nadine*, arms, *Simon*]
P26	2	around-neck [P25]
P27	2	cover [*Nadine*, neck, *Simon*]
P28	2	with-kisses [P27]
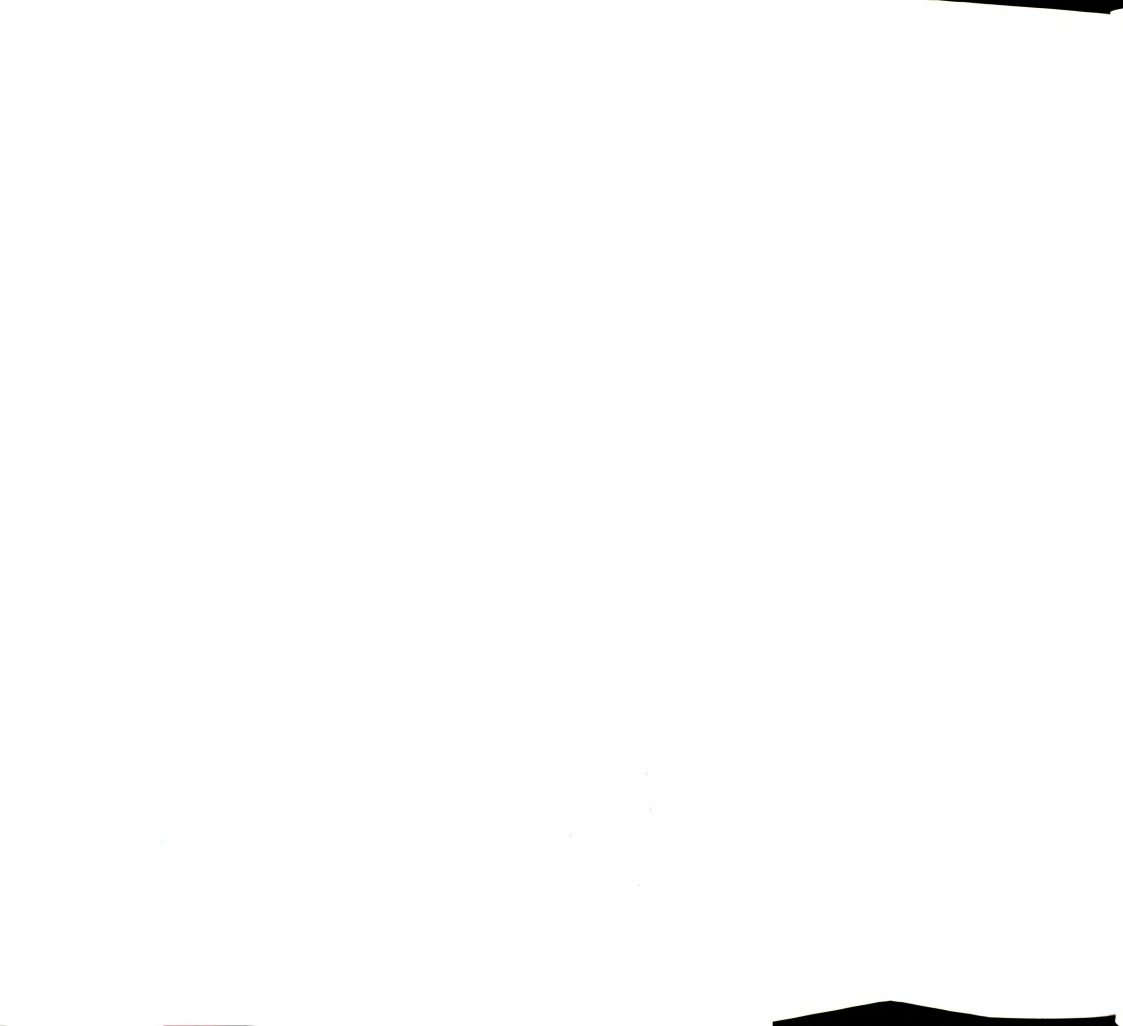
P29	1	CON (and) [P25, P27]
P30	1	CON (since that time/then) [P31]
P31	2	hide [*Simon*, egg]
P32	2	in-house [P31]
P33	2	in-garden/yard [P31]
P34	1	little [P33]
P35	1	CON (or) [P31, P33]
P36	1	CON (every year) [P31]
P37	1	CON (on Easter) [P31]
P38	2	look [Nadine, *egg*]
P39	1	CON (everywhere) [P38]
P40	2	wake up [*Nadine*]
P41	1	CON (as soon as) [P40]
P42	2	follow [Simon, *Nadine*]
P43	2	with-amused [look] [P42]
P44	1	CON (and) [P38, P42]
P45	2	find [*Nadine, egg*]
P46	2	bite [Nadine,chocolate/egg]
P47	1	CON (hard) [P46]
P48	1	CON (when) [P45]
P49	1	CON (finally) [P45]
P50	2	find out [*Nadine*, P49]
P51	2	inside/hiding inside [egg]
P52	1	CON (like) [P21/first time]
P53	1	CON (in order to) [P46, P50]
P54	2	find [Nadine, jewelry]
P55	1	CON (often) [P54]
P56	1	CON (most) [P55]
P57	2	find [*Nadine*, paper]
P58	1	CON (several times) [P57]
P59	2	read [*Nadine*]/said [*paper*] ["good for a dress"]
P60	2	read [*Nadine*]/said [*paper*] ["good for a surprise"]
P61	1	CON (or) [P59, P60]
P62	2	is [year, subject, story]
P63	1	CON (before) [P62]
P64	2	is [Nadine, P63]
P65	1	little [disappointed]
P66	1	CON (maybe/perhaps) [P64]
P67	2	is [Simon, busy]
P68	2	with-work [P67]
P69	2	not go to trouble [*Simon*]
P70	2	find [*Simon*, P69]
P71	1	difficult [hiding place]
P72	1	CON (in order to) [P70]
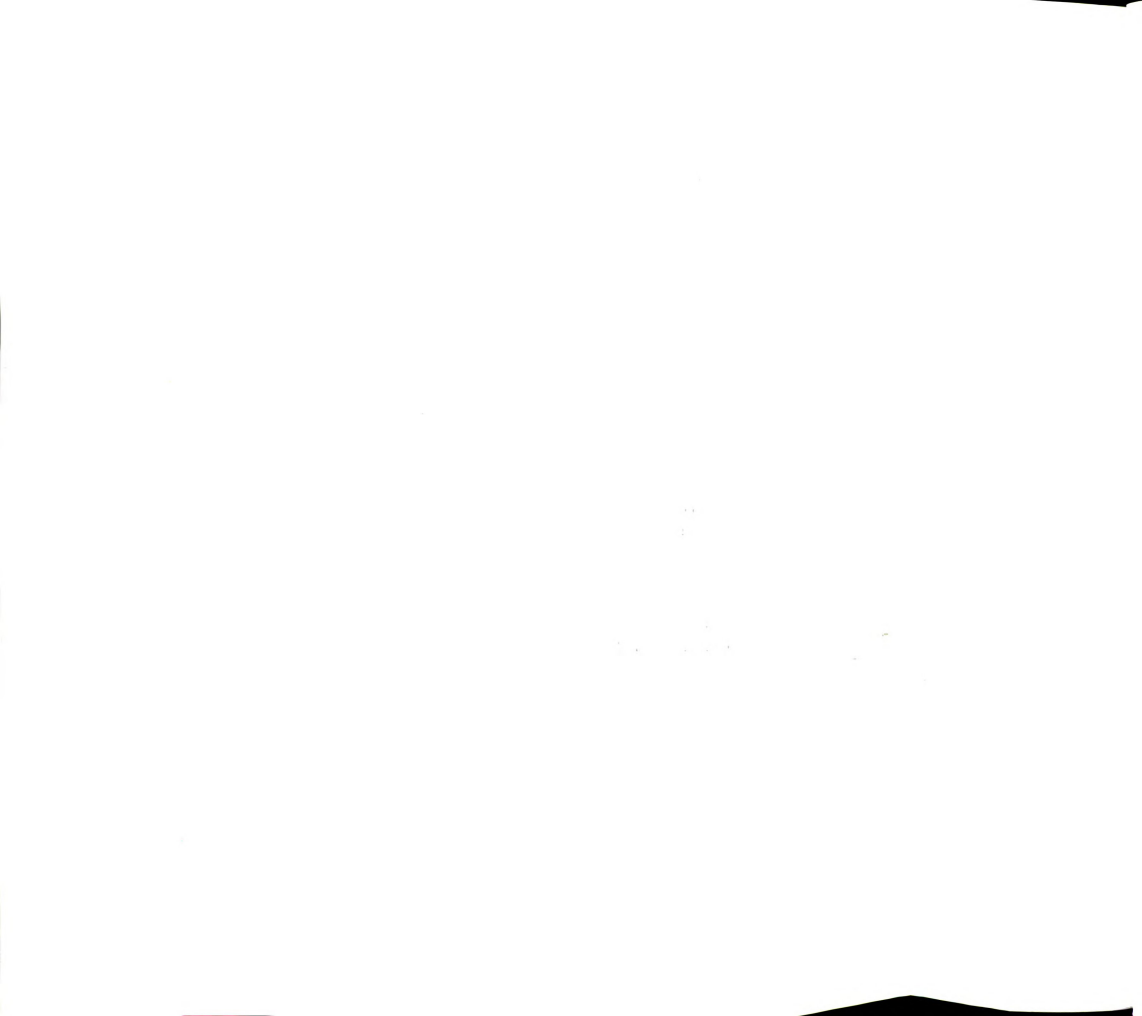
P73	2	find [Nadine, egg]
P74	2	in-pan/casserole dish [P73]
P75	2	use [*Nadine, pan*]
P76	2	boil [*Nadine*, milk]
P77	1	CON (in order to) [P75]
P78	1	CON (after/in five minutes) [P73]
P79	2	bite [*Nadine, chocolate/egg*]
P80	2	see/find [*Nadine*, P79*]
P81	2	100 franc [note/bill]
P82	1	CON (and) [P79, P80]
	130	

Expository Text 1: The Café in Student Life

P1	2	plays [café, P2]
P2	1	important/large [role/part]
P3	1	French [students]
P4	2	in-social lives [P3]
P5	2	spend [P6, P7]
P6	2	so many [students]
P7	1	important/large amount of [time]
P8	2	in-cafes [P5]
P9	2	seem like [P7, waste of time]
P10	2	respond [P7, P11]
P11	2	various/variety of [needs]
P12	2	want/look to [student, satisfy, P11]
P13	2	devote [*student*, study time/studies*]
P14	2	outside [P13]
P15	1	CON (in truth/opposition) [P9, P10]
P16	2	go [*student*, to-café]
P17	2	look [*student*, refuge/escape]
P18	2	between-classes [P17]
P19	1	CON (not only) [P16, P17]
P20	2	is [library, full]
P21	1	CON (when) [P17, P20]
P22	2	avoid [*student*, need to go back]
P23	2	to-room [P22]
P24	2	is [*room*, far away]
P25	2	from-university [P24]
P26	2	is [*room*, cramped/small]
P27	1	CON (or) [P24, P26]
P28	2	is [*room*, poorly heated]
P29	1	CON (or) [P26, P28]
P30	2	is [*room*, expensive to heat]
P31	1	CON (or) [P28, P30]
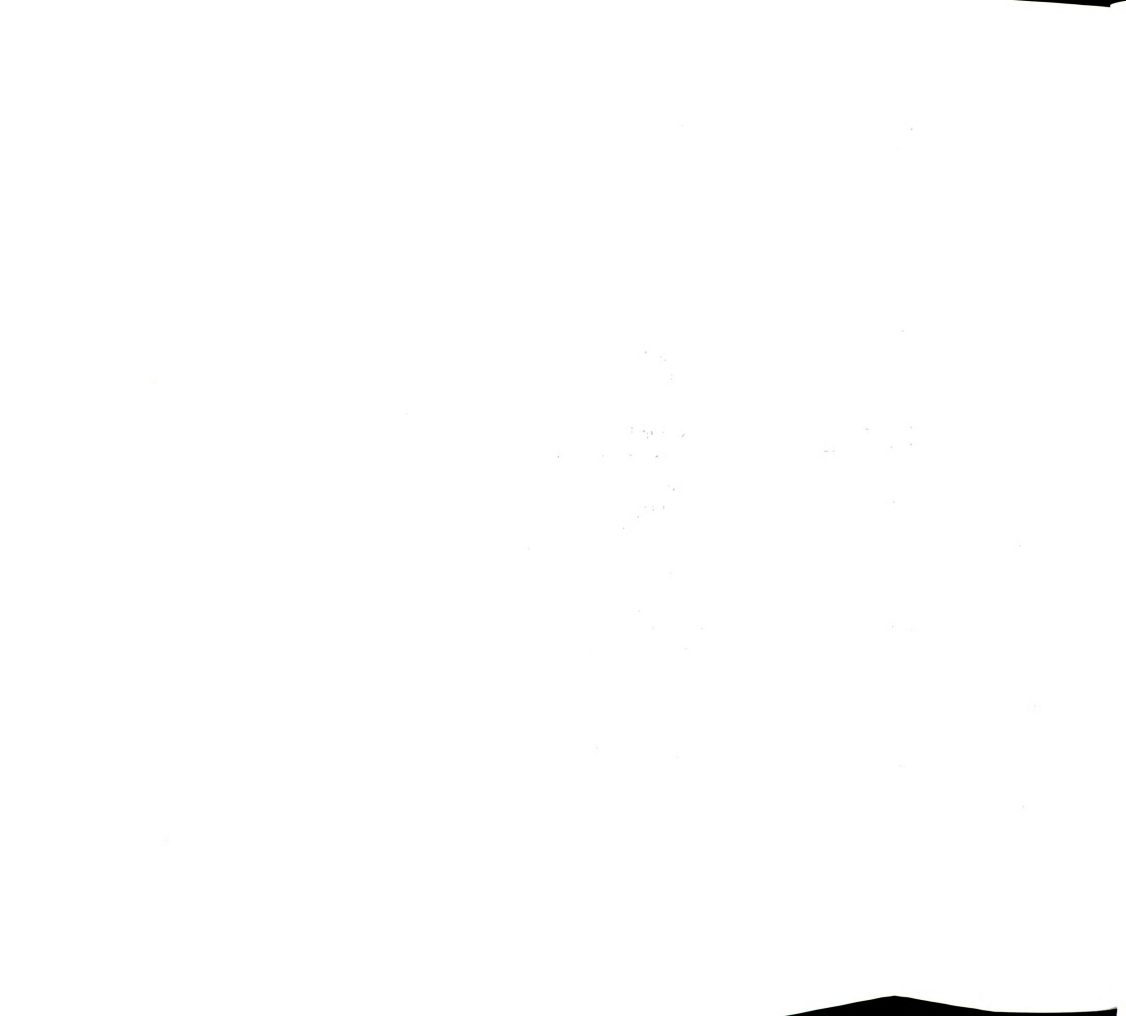
P32	2	seems [café, respond, P33] / respond [café, P33]
P33	2	for-contact [need]
P34	1	CON (above all) [P32]
P35	2	not satisfy [university, P33]
P36	1	CON (until now) [P35]
P37	2	is [café, place]
P38	1	CON (often) [P37]
P39	2	flee [*student,* solitude]
P40	1	CON (only) [P37, P38]
P41	2	strike up/make [*student,* acquaintainces]
P42	2	make [*student,* friends]
P43	1	CON (and) [P41, P42]
P44	2	go [P45, to-P46]
P45	1	loneliest [*students*]
P46	1	same [café]
P47	1	CON (always) [P44]
P48	2	feel [*loneliest students,* at-home]
P49	2	take pleasure [*students,* see, regulars]
P50	2	take pleasure [*students,* P51]
P51	2	treat [waiters, *students,* friendly way*]*
P52	1	CON (and) [P49, P50]
P53	2	become [friendships, *more important*]
P54	2	become [romances, more important]
P55	1	CON (and) [P53, P54]
P56	1	CON (at an age where]) [P53, P54]
P57	2	is [relationships, with-family, important]
P58	1	CON (than) [P53, P57]
P59	2	appreciate [students, everything]
P60	2	offers/provides [environment, of-P61]
P61	1	familiar [café]
P62	1	CON (that) [P59, P60]
P63	2	cannot [*student,* find, friendship]
P64	2	cannot [*student,* find, camaraderie]
P65	1	CON (and) [P63, P64]
P66	2	with-family [P63, P64]
P67	2	not have to/not be obligated to [*one/student,* P68]
P68	2	answer [*one/student,* calls/demands/phone]
P69	1	CON (always) [P67]
P70	1	CON (at café)
P71	2	is [*café,* relaxing]
P72	2	is [*one/student,* P73]
P73	2	with-other young [people]
P74	2	is [*being at café,* better]
P75	2	be [*student,*with-family]

P76	1	CON (than) [P74, P75]
P77	2	become [student, P78]
P78	1	sociable [being]
P79	2	at-café [P77]
P80	2	experiences [*student,* P81]
P81	1	random [encounters]
P82	2	is [*encounters,* unimportant]
P83	2	is [*encounters,* significant]
P84	1	CON (or) [P82, P83]
	138	

Expository Text 2 (Pilot Study): The Buddhist Wave

P1	1	every [morning]
P2	2	three years [P1]
P3	1	CON (nearly) [P2]
P4	1	CON (like) [P1, P2]
P5	2	get up [Francois]
P6	2	at-dawn [P5]
P7	2	in-P8 [P5]
P8	1	studio [apartment]
P9	1	Parisian [P8]
P10	2	live [*Francois, P8]*
P11	1	CON (alone) [P10]
P12	2	shower [*Francois*]
P13	1	quick [P12]
P14	1	CON (after) [P12]
P15	2	slips/puts on [*Francois,* P16]
P16	1	jogging [pants]
P17	2	do [*Francois,* zazen]
P18	2	is [zazen, P19]
P19	1	silent [meditation]
P20	1	seated [*meditation*]
P21	1	zen buddhist [*meditation*]
P22	2	sit [*Francois,* cross-legged]
P23	2	face [*François,* wall]
P24	2	on-zafu [P24]
P25	2	*is* [*zafu,* cushion]
P26	1	round [*cushion*]
P27	1	thick [*cushion*]
P28	2	is [back, *Francois,* straight]
P29	1	CON (perfectly) [P28]
P30	2	is [hands, *Francois,* joined/folded]
P31	2	over-abdomen [P30]
P32	2	is [eyes, *Francois,* half-closed]
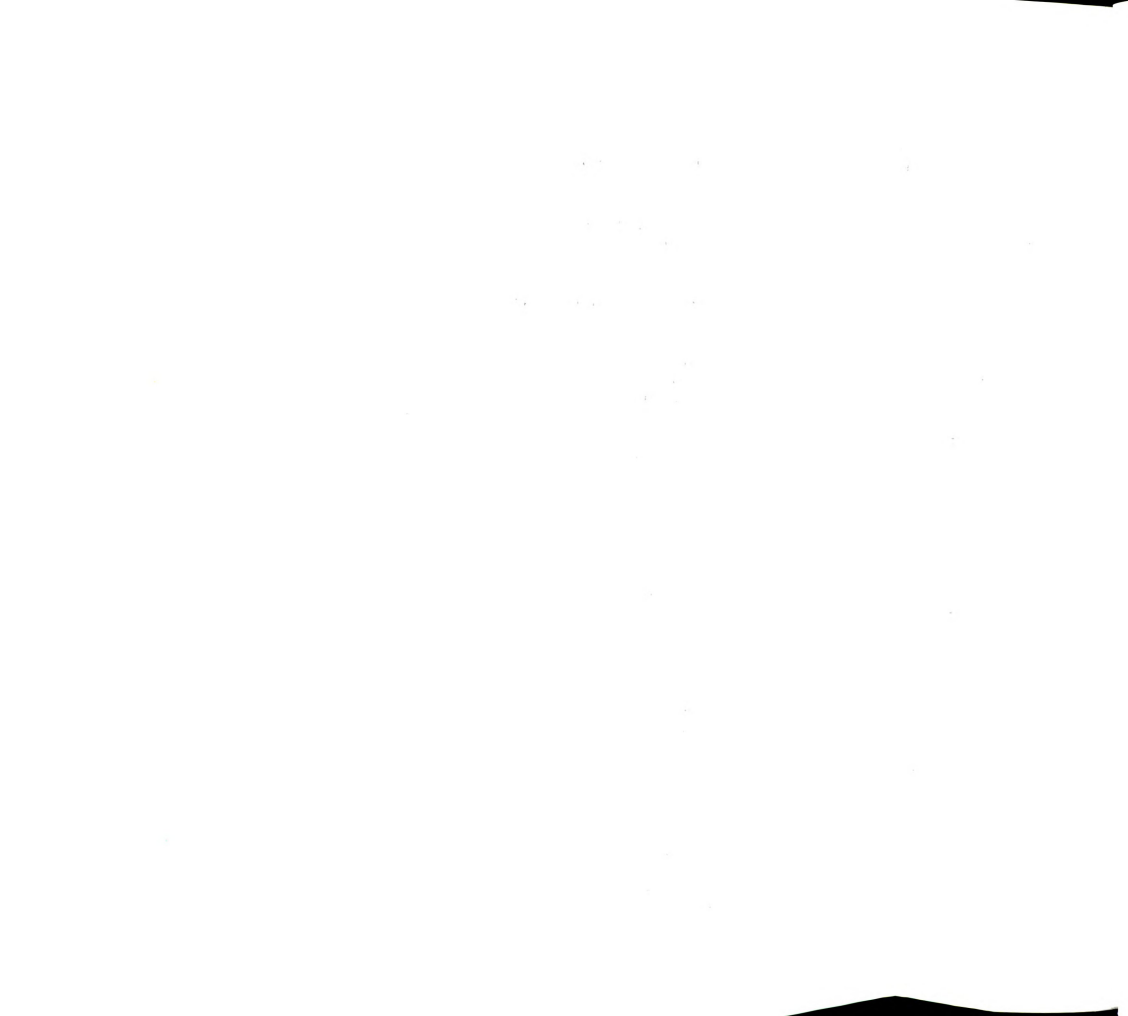
P33	2	focus on/pay attention to [*Francois,* breathing]
P34	1	long [breathing]
P35	1	deep [breathing]
P36	1	CON (and) [P33, P34]
P37	2	is [Francois, part/one]
P38	2	of-tens of thousands [P39]
P39	2	of-French people [P40]
P40	2	come [P39, to Buddhism]
P41	2	through-meditation [P40]
P42	1	most [P43]
P43	1	new [followers]
P44	2	aged [P43, 30-45 years]
P45	2	is [P43, single]
P46	2	is [P43, city-dweller] / live [P43, in city]
P47	2	live [P43]
P48	2	with-partner [P47]
P49	1	CON (or) [P45, P48]
P50	1	CON (like) [*Francois,* P44]
P51	2	is [*followers,* college-educated]
P52	1	CON (like) [Francois, P51]
P53	2	is [*followers,* management]
P54	2	is [*followers,*professional]
P55	1	CON (or) [P53, P54]
P56	1	CON (also) [P53]
P57	2	start [Buddhism, spread]
P58	1	CON (recently) [P57]
P59	2	to-levels [P57]
P60	1	all [P59]
P61	2	of-population [P59]
P62	2	become [*Buddhism,* P63, P64]
P63	1	stunning [*phenomena*]
P64	1	spiritual [phenomena]
P65	2	most [P63]
P66	2	of-society [P63]
P67	1	CON (at end of 20th century) [P62]
P68	2	respond [P69, Buddhism]
P69	2	2 million [French people]
P70	2	to-question [P68]
P71	2	prefer [*French people,* religion]
P72	2	ranks/comes in [Buddhism/religion of Buddha*]*
P73	2	in-3rd place [P72]
P74	2	behind-Catholicism [P72]
P75	2	68% [Catholicism]

P76	1	CON (even more surprising) [P72]
P77	2	is [*Buddhism,* equal]
P78	1	CON (almost) [P80]
P79	1	CON (but) [P77]
P80	2	to-Protestantism [P77]
P81	2	6% [Protestantism]
P82	2	receive [Buddhism, P83, French people]
P83	2	6 million [votes]
P84	1	in-ranking [P82]
P85	2	of-three religions [P84]
P86	2	by-decreasing order [P84]
P87	1	of-interest [86]
P88	2	appear [Buddhism]
P89	2	in-public opinion poll [P89]
P90	1	CON (first time) [P89]
P91	2	about-beliefs [P90]
P92	2	of-French people [P90]
	148	

Expository Text 2 (Present Study): Sports: Man without Limits

P1	1	faster [*athletes*]
P2	1	higher [*athletes*]
P3	1	stronger [*athletes*]
P4	2	renovate [P5, P6]
P5	1	Baron [Pierre de Couvertin]
P6	1	Olympic [games]
P7	1	CON (since) [P4, P8]
P8	1	CON (end of 19th century) [P4]
P9	2	govern [P10, P11]
P10	1	one [law]
P11	1	modern [sports]
P12	1	more [*performance*}
P13	1	better [*performance*]
P14	1	CON (*always*) [P12, P13]
P15	2	gnaw off [*athletes,* seconds]
P16	1	*gnaw off [athletes,* centimeters*]*
P17	2	invent [Middle Ages, P18]
P18	1	mechanical [clock]
P19	1	CON (and) [P17, P20]
P20	2	discipline [*Middle Ages,* time]
P21	1	CON (thus) [P17, P20]
P22	1	CON (today) [P23]

P23	1	record [syndrome]
P24	2	is [P23]
P25	1	CON (on) [P26]
P26	1	mind [everyone]
P27	1	CON (during) [P28, P29]
P28	1	olympic [games]
P29	1	22nd [P28]
P30	1	15,000 [athletes]
P31	1	more than [P30]
P32	2	attempt [P30]
P33	2	surpass [P30, limits]
P34	1	some [P35]
P35	1	other [*athletes*]
P36	2	try [P35, P37]
P37	2	go beyond [P38]
P38	1	natural [limits]
P39	1	CON (but) [P40, P41]
P40	2	go [champions]
P41	1	CON (how far) [P40]
P42	1	CON (besides) [P43]
P43	2	exist [limits]
P44	1	CON (really) [P43]
P45	2	become [stadium, P49]
P46	2	*become* [pool, P49]
P47	2	*become* [gym, P49]
P48	1	CON (and) [P45, P46, P47]
P49	1	research [centers]
P50	2	stuff [athletes, self]
P51	1	CON (at) [P50, P52]
P52	1	high [levels]
P53	1	CON (with) [P50, P52]
P54	1	high [technology]
P55	1	CON (with) [P56]
P56	1	oxygen [mask]
P57	1	CON (on) [P58]
P58	1	their/*athletes* [faces]
P59	1	CON (or) [P56, P60]
P60	1	helmet [camera]
P61	1	CON (on) [P62]
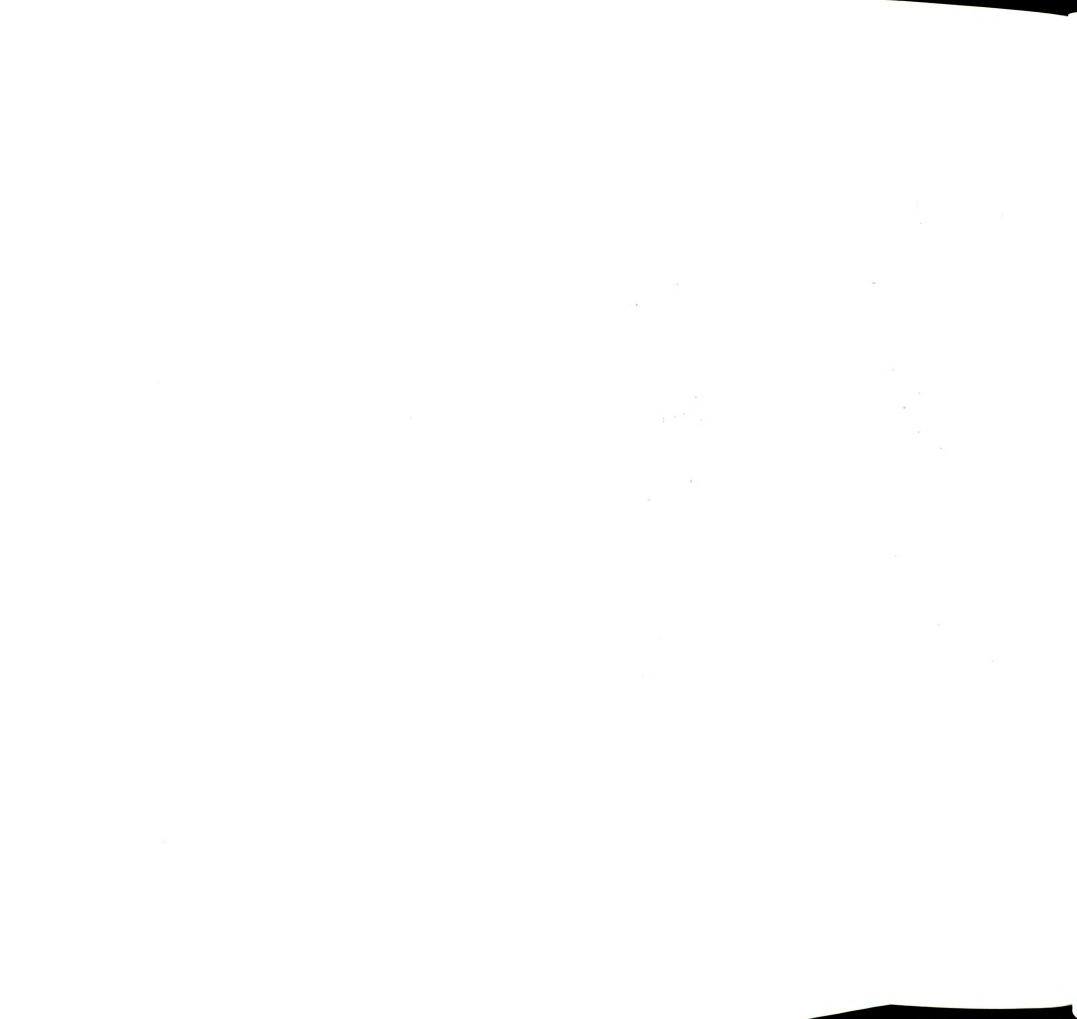
P62	1	their/*athletes* [heads]
P63	1	CON (and) [P63, P65]
P64	1	CON (on) [P66, P67]
P65	2	sidelines [tracks]
P66	2	*sidelines* [pools]
P67	1	CON (or) [P66, P67]
P68	2	test [we/they/others]
P69	2	measure [they/we/others]
P70	1	*test* [everything]
P71	1	*test* [always]
P72	1	metabolic [potential]
P73	1	maximal [consumption]
P74	1	oxygen [*consumption*]
P75	1	takeoff [speed]
P76	1	stride [length]
P77	2	repeat [fencers, P78]
P78	1	favorite [blows]
P79	1	CON (on) [P77, P80]
P80	1	*is* [Armivex]
P81	1	hexagonal [shield]
P82	1	metallic [*shield*]
P83	2	carry [P80, P84]
P84	1	six [targets]
P85	1	small [*targets*]
P86	1	circular [*targets*]
P87	2	is [*targets*, equipped]
P88	1	CON (with) [P87, P89]
P89	2	at-center [bulb, P87]
P90	1	CON (as soon as) [P91]
P91	2	light up [*bulb*/one]
P92	2	must touch [athlete, *bulb*]
P93	1	CON (and) [P94]
P94	2	calculate [computer, P95]
P95	1	reaction [time]
P96	2	is [tied, P97, P98]
P97	1	equipment [evolution]
P98	1	technique [*evolution*]
P99	1	CON (and) [P97, P98]
P100	1	CON (also) [P96, P102]
P101	1	CON (directly) [P96, P102]
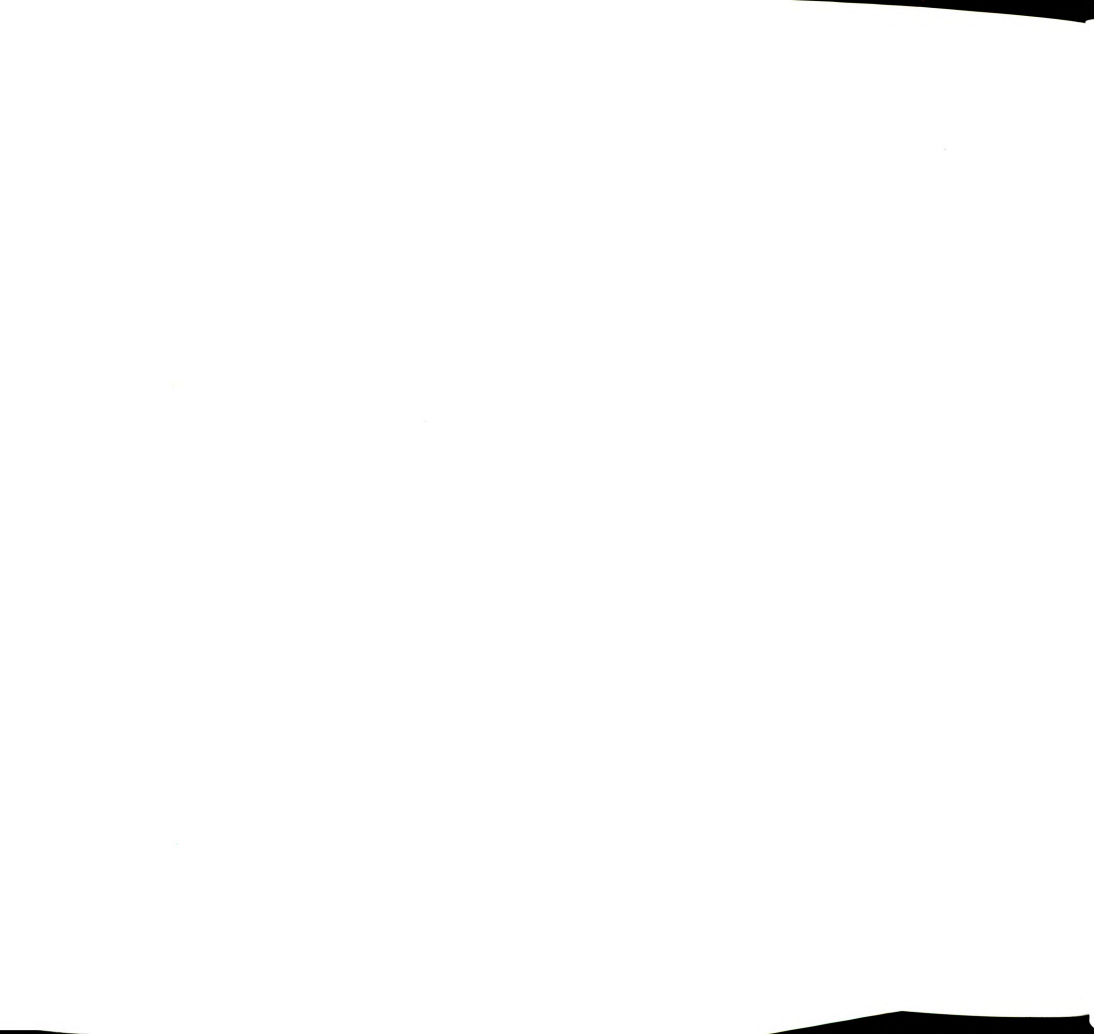
P102	2	to-high technology [P96]
P103	1	CON (today) [P104]
P104	2	dissect [P109, P105]
P105	1	smallest [gesture]
P106	1	sports [*gesture*]
P107	2	break down [P109, P105]
P108	2	analyze [P109, P105]
P109	1	scientist [computers]
P110	1	CON (thus) [P112]
P111	1	CON (when) [P112]
P112	2	appear [P113]
P113	1	new [gesture/movement]
P114	2	*appear* [P113]
P115	1	new [technique]
P116	2	in-stadium [P112, P115]
P117	2	in-gym [P112, P115]
P118	2	in-pool [P112, P115]
P119	1	CON (or) [P116, P117, P118]
P120	2	leave [they/scientists, nothing]
P121	2	to-chance [P120]
	160	

Note. Adapted from Pulido (2004). P=Proposition. CON=sentence connective (e.g., causal, condition, purpose, concession, conjunction, and temporal). 1=proposition worth 1 point. 2=proposition worth 2 points. Italicized words represent overlap of arguments *not* explicitly stated in the text.
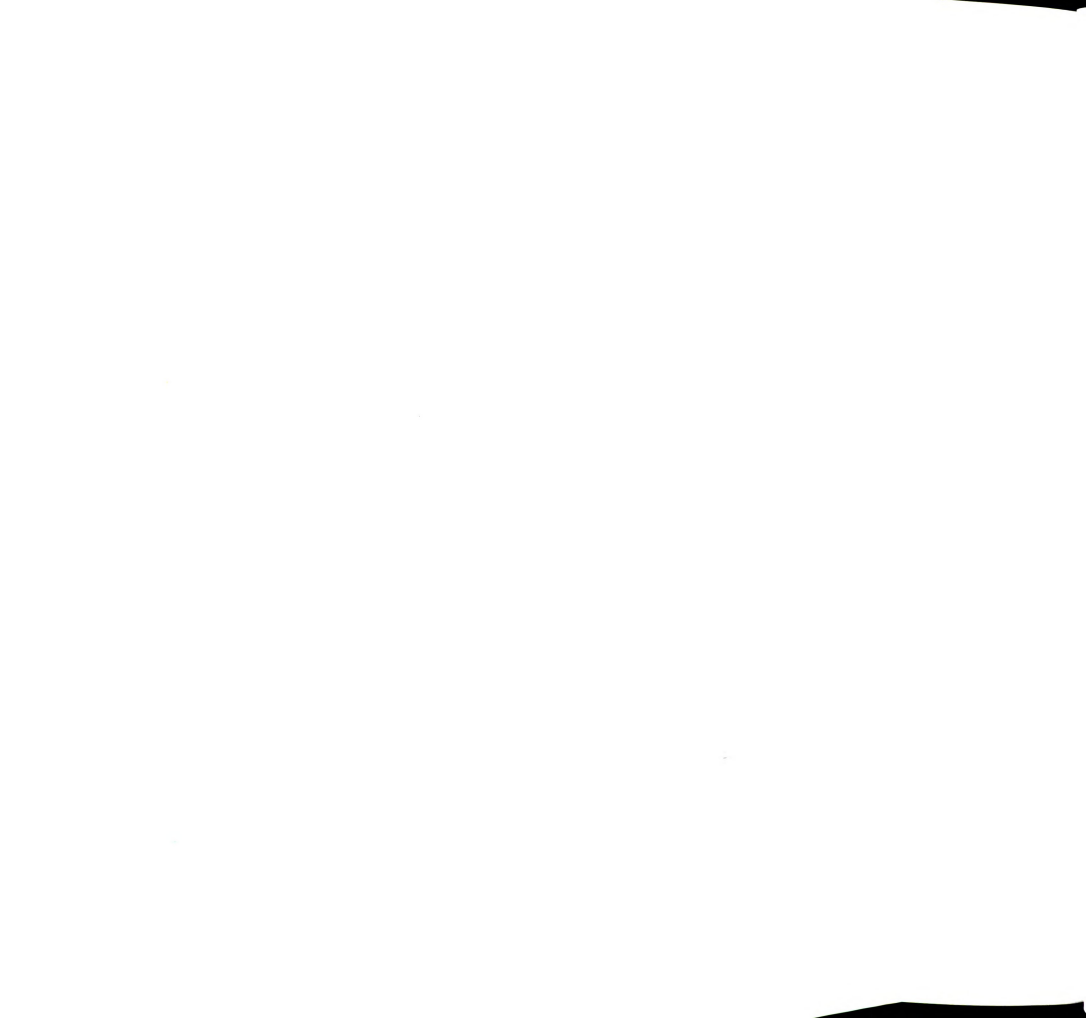
Appendix C

Motivation for French Study Questionnaire, Pilot Study

<u>WHY DO YOU STUDY FRENCH?</u>

Using the scale below, indicate to what extent each of the following items currently corresponds to one of the reasons you study French. Circle only one number per question.

Does not correspond at all	Corresponds a little	Corresponds moderately	Corresponds a lot	Corresponds exactly
1	2	3	4	5	6	7

WHY DO YOU STUDY FRENCH?

1. Because studying French will help me get a high-paying job.
2. Because I experience pleasure and satisfaction while learning new things.
3. Because I think studying French will help me better prepare for the career I have chosen.
4. For the intense feelings I experience when I am communicating with others.
5. Honestly, I don't know; I really feel I am wasting my time studying French.
6. For the pleasure I experience while surpassing myself in my studies.
7. To prove to myself that I am capable of accomplishing something.
8. In order to obtain a more prestigious job later on.
9. For the pleasure I experience when I discover new things never seen before.
10. Because eventually it will enable me to enter the job market in a field I like.
11. For the pleasure I experience when I read interesting authors.
12. I once had good reasons for studying French; however, now I wonder whether I should continue.
13. For the pleasure that I experience when I am surpassing myself in one of my personal accomplishments.
14. Because of the fact that when I succeed in my French studies I feel important.
15. Because I want to have "the good life" later on.
16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.
17. Because it will help me make a better choice regarding my career orientation.
18. For the pleasure I experience when I feel completely absorbed by what certain authors have written.
19. I can't see why I am studying French and frankly, I couldn't care less.
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.
21. To show myself that I am an intelligent person.
22. In order to have a better salary later on.
23. Because studying French allows me to learn about many things that interest me.
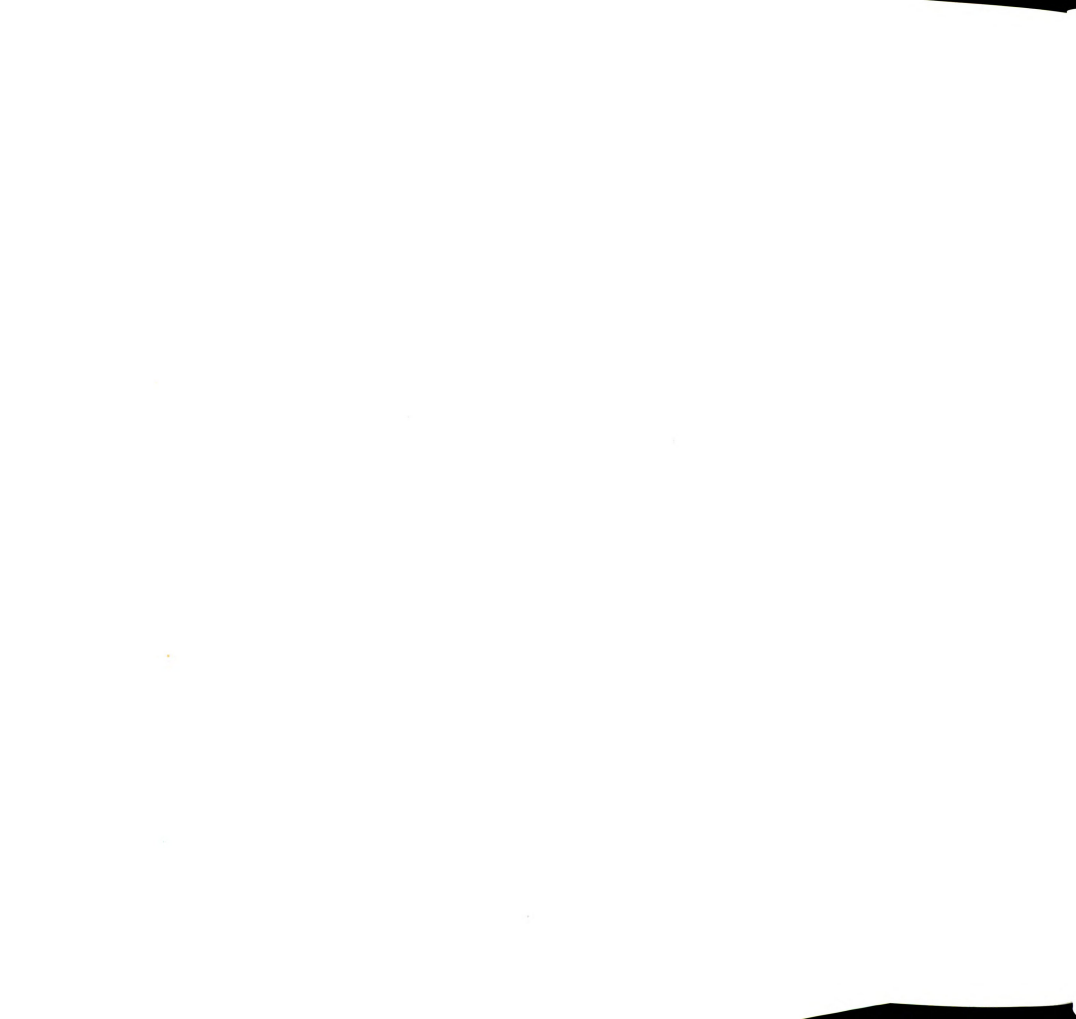
24. Because I believe that studying French will improve my competence as a worker.
25. For the "high" feeling that I experience while learning about various interesting subjects.
26. I don't know; I can't understand why I am studying French.
27. Because it allows me to experience a personal satisfaction in my quest for excellence in my studies.
28. Because I want to show myself that I can succeed in my studies.

Appendix D

Reading Activity in French, Pilot Study

Directions: We are interested in knowing about your reading activities in French and finding out how often you do them. Circle the answers to some questions, and write the answers to the others.

I. Questions about school reading in French
Directions: In this section, think about reading in French that you do for school and for homework. CIRCLE ONLY ONE ANSWER PER QUESTION.

1) Did you read a French textbook for school last week?

No......1   Yes...2

If yes, write in the specific topic(s) you read about:

_____

2) How often do you read a French textbook for school?

Almost never...1	About once a month...2	About once a week...3	Almost every day...4
	How many hours / month? _____	How many hours / week? _____	How many hours / day? _____

3) Did you read a book of literature or fiction in French last week for school?

No......1   Yes...2

If yes, write in the title, author, or the specific topic(s) you read about:

_____

4) How often do you read a book of literature or fiction in French for school?

Almost never...1	About once a month...2	About once a week...3	Almost every day...4
	How many hours / month? _____	How many hours / week? _____	How many hours / day? _____

5) Did you read a nonfiction book in French for school last week?
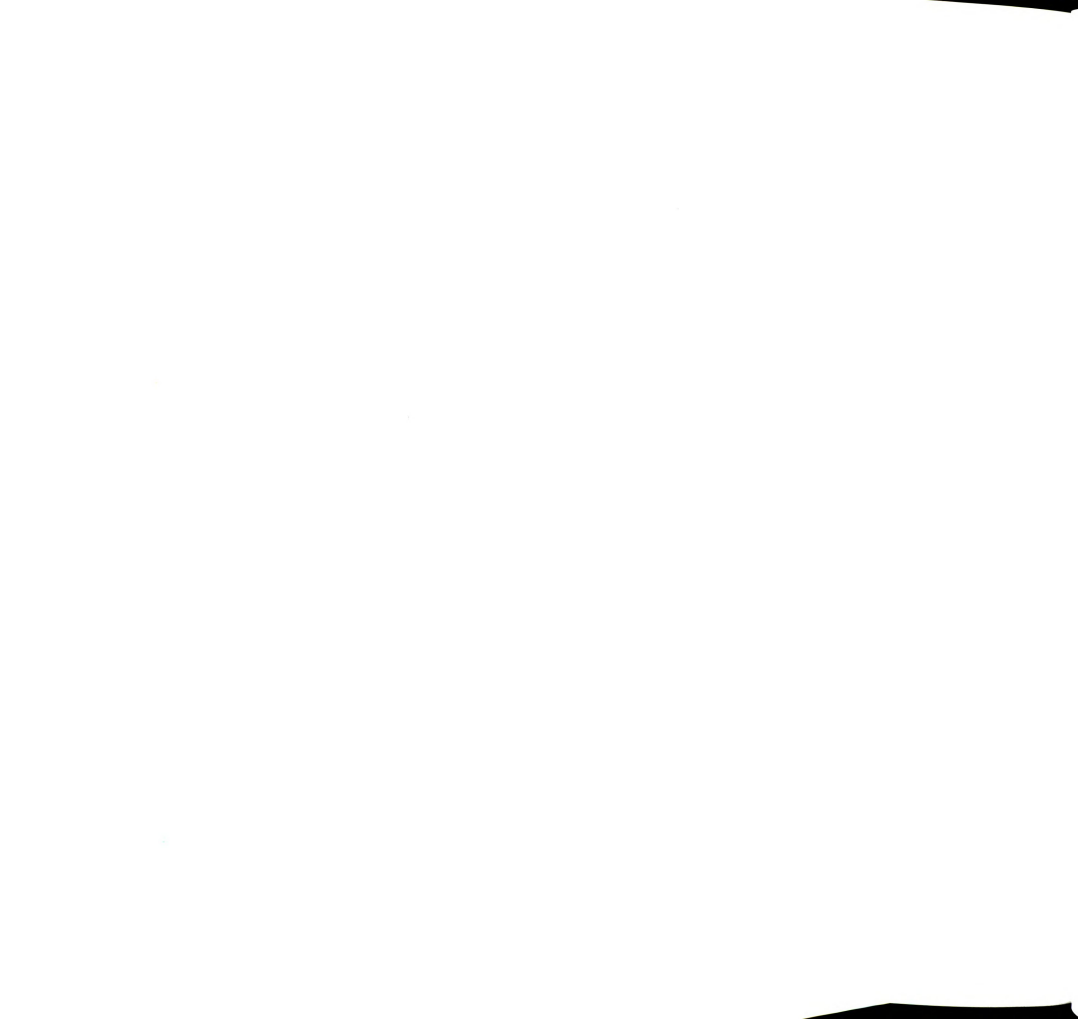
No......1   Yes...2

If yes, write in the title, author, or the specific topic(s) you read about:

_____

6) How often do you read a nonfiction book in French for school?

Almost never...1   About once a   About once a   Almost every day...4
                       month...2   week...3

                       How many hours /   How many hours /   How many hours / day?
                       month? _____   week? _____   _____

7) Did you read any materials other than books in French for school last week
(magazines, newspapers, journals, online materials)?

No......1   Yes...2

If yes, write in the title, author, or the specific topic(s) you read about:

_____

8) How often do you read materials other than books in French for school?

Almost never...1   About once a   About once a   Almost every day...4
                       month...2   week...3

                       How many hours /   How many hours /   How many hours / day?
                       month? _____   week? _____   _____

II. Questions about reading for your own enjoyment in French
Directions: In this section, think about reading in French that you read for your own
interest that are not assigned for school or homework. CIRCLE ONLY ONE ANSWER
PER QUESTION.

9) Did you read a fiction book in French last week for your own interest?

No......1   Yes...2

If yes, write in the title, author, or the specific topic(s) you read about:

_____

10) How often do you read fiction books in French for your own interest?

Almost never...1   About once a   About once a   Almost every day...4
                      month...2   week...3

                      How many hours /   How many hours /   How many hours / day?
                      month? _____   week? _____   _____

11) Did you read a nonfiction book in French last week for your own interest?

No......1   Yes...2

If yes, write in the title, author, or the specific topic(s) you read about:

_____

12) How often do you read fiction books in French for your own interest?

Almost never...1   About once a   About once a   Almost every day...4
                      month...2   week...3

                      How many hours /   How many hours /   How many hours / day?
                      month? _____   week? _____   _____

13) Did you read a magazine or newspaper in French last week for your own interest?

No......1   Yes...2

If yes, write in the title, author, or the specific topic(s) you read about:

_____

14) How often do you read magazines or newspapers in French for your own interest?

Almost never...1   About once a   About once a   Almost every day...4
                      month...2   week...3

                      How many hours /   How many hours /   How many hours / day?
                      month? _____   week? _____   _____

15) Did you read any online materials in French (web pages, online articles, blogs, etc.) last week for your own interest?

No......1   Yes...2

If yes, write in the title, author, or the specific topic(s) you read about:

_____

16) How often do you read online materials in French for your own interest?

Almost never...1	About once a month...2	About once a week...3	Almost every day...4
	How many hours / month? _____	How many hours / week? _____	How many hours / day? _____

17) Did you read any other materials in French last week for your own interest that were not mentioned?

No......1   Yes...2

If yes, describe what you read:

_____

18) How often do you read other materials in French for your own interest?

Almost never...1	About once a month...2	About once a week...3	Almost every day...4
	How many hours / month? _____	How many hours / week? _____	How many hours / day? _____

Appendix E

Familiarity Questionnaire, Pilot Study

Using the scale below, indicate to what extent each of the following items is familiar to you. Circle only one number per question.

Not at all familiar	A little familiar	Somewhat familiar	Very familiar	Completely familiar
1	2	3	4	5	6	7

How familiar are you with the following topics or situations? Circle only one number per question.
1) Registering for classes at a university
2) Being your own boss
3) Building a skyscraper
4) Dining out in France
5) Camping
6) Christmas traditions
7) Religion in France
8) Life in a big city
9) Easter traditions
10) French student life

How familiar are you with the following types of texts? Circle only one number per question.
1) Poems
2) Informational articles (magazine, newspaper, etc.)
3) Fairy tales
4) Editorials
5) Short stories
6) Plays
7) Novels

How familiar were you with the topics of the texts you read for this study BEFORE you read the texts? Circle only one number per question.
1) *Les trois motocyclistes*
2) *L'œuf de Pâques*
3) *Le café dans la vie des étudiants*
4) *La vague bouddhiste*

Text Reactions Questionnaire (Pilot Study)

Using the scale below, indicate the level of difficulty of each text that you read. Circle only one number per question.

Not at all difficult	A little difficult		Somewhat difficult	Very difficult		Extremely difficult
1	2	3	4	5	6	7

1) *Les trois motocyclistes*
2) *L'œuf de Pâques*
3) *Le café dans la vie des étudiants*
4) *La vague bouddhiste*
Please comment on why each text was difficult or not difficult. PLEASE PROVIDE A COMMENT FOR EACH TEXT – DO NOT LEAVE ANY SECTIONS BLANK.

1) *Les trois motocyclistes :*
2) *L'œuf de Pâques :*
3) *Le café dans la vie des étudiants :*
4) *La vague bouddhiste:*

Using the scale below, indicate your much you liked reading each text. Circle only one number per question.

Disliked completely	Disliked somewhat		Neither liked nor disliked	Liked somewhat		Liked a lot
1	2	3	4	5	6	7

1) *Les trois motocyclistes*
2) *L'œuf de Pâques*
3) *Le café dans la vie des étudiants*
4) *La vague bouddhiste*
Please comment on why you liked or did not like reading each text. PLEASE PROVIDE A COMMENT FOR EACH TEXT – DO NOT LEAVE ANY SECTIONS BLANK.

1) *Les trois motocyclistes :*
2) *L'œuf de Pâques :*
3) *Le café dans la vie des étudiants :*
4) *La vague bouddhiste :*

Appendix G

Metacognition Questionnaire

Questions about yourself and what you know about texts and reading

In this questionnaire, you will be asked to read a number of statements about texts: what they look like, how they are organized and how you can read them. Most statements have to do with reading in any language. If a statement has to do with reading in English or French, this will be mentioned clearly in the statement. Read these statements carefully and then circle whether you *agree* or *disagree* with each statement. Circle only one answer per statement.

Texts:

The only purpose of paragraphs is to make sure that there are not too many sentences in a row.	agree	disagree
Words that look the same in French and English always have the same meaning.	agree	disagree
A sentence that is polite in English is also polite if you translate it literally into French.	agree	disagree
Words like *first* and *second* are used to show that a text contains several things about the same topic.	agree	disagree
Changing the order of information in a text can change the meaning of the text as a whole.	agree	disagree
Commas are put in the same place in French sentences as in English sentences.	agree	disagree
To be able to understand a text properly, you sometimes need to know things that are not said in the text.	agree	disagree
Words like *furthermore*, *besides* and *moreover* are used to show that the writer is adding some extra information.	agree	disagree
Words like *he* and *she* often refer to people the writer has not mentioned before.	agree	disagree
Not all parts of a text deal with the main idea of the text.	agree	disagree
All the sentences in a text are equally important for the main idea of the text.	agree	disagree
There is always just one possible word order in a sentence.	agree	disagree
A paragraph usually has more than one main idea.	agree	disagree
If you translate an English letter into French, you cannot translate the closing of the letter literally.	agree	disagree
Words like *but* and *however* are followed by something which differs from what has already been said.	agree	disagree
A report is a description of a situation or event that provides the reader with information.	agree	disagree
The title often tells you what a text is about.	agree	disagree
Texts in French and in English are clearly organized differently.	agree	disagree
The new information contained in a sentence is usually put at the beginning of the sentence.	agree	disagree
The order of the information in a text is usually unimportant.	agree	disagree
Spoken language and written language are exactly the same.	agree	disagree
You can usually tell from the words in a letter whether the writer and the	agree	disagree

person who will receive the letter know each other well.

The way texts are divided into paragraphs is generally the same in English and French.	agree	disagree
The word order in a French sentence is often different from the word order in an English sentence.	agree	disagree
Texts sometimes differ in the way they are organized.	agree	disagree

Reading texts:
The following statements are about reading texts about a certain topic (e.g. about history or about a hobby). The statements are NOT about reading in an English or French reading comprehension test.

While you are reading, it is sensible to spend the most energy on remembering the details of the text.	agree	disagree
When you read a chapter in a textbook, it is useful to first read all the headings in the chapter to get an idea of what the chapter is about.	agree	disagree
If you don't understand the meaning of a word, it is useful to try and guess the meaning from the surrounding words and sentences.	agree	disagree
When you read in French, it is useful to concentrate more on the meaning of the words than on understanding the ideas.	agree	disagree
If you read something that is difficult to understand, it is useful to try and put it into your own words.	agree	disagree
If you read a text to find a specific piece of information quickly (e.g.: a date), it is sensible to read the text thoroughly.	agree	disagree
While you are reading, it is useful to mentally summarize what you have read so far.	agree	disagree
If you don't understand something in a text, it is sensible to go back to a place in the text before the problem and reread from there.	agree	disagree
Before you start reading, it is sensible to use the title and any pictures to make guesses about what the text will be about.	agree	disagree
If you want to understand the most important ideas in a text, it is important to look up every word you don't know in a dictionary.	agree	disagree
It is sometimes useful to skip difficult words in a text.	agree	disagree
If you don't understand the meaning of a word in a French text, it is useful to look it up in a French-English dictionary.	agree	disagree
While you are reading, it is sensible to keep on silently repeating every word.	agree	disagree
If you don't understand a word, it is useful not to read on until you understand it.	agree	disagree
While you are reading, it is sensible to try to remember all the words in the text.	agree	disagree
Before you start reading, it is wise to think about why you are going to read the text.	agree	disagree
It is sensible to change the way you read depending on what you want to know about a text.	agree	disagree
It is sensible to ask yourself questions about what you are reading.	agree	disagree
To understand a text, it is useful to try and remember every detail of what you are reading.	agree	disagree
If you want to get a general impression of what a text is about, it is sensible not to read everything.	agree	disagree
If you don't understand a sentence, it is sensible to ask yourself questions to find out exactly what it is you don't understand.	agree	disagree

When you are reading, it is sensible to use the organization of the text to help you understand it.	agree	disagree
If you don't understand a sentence, it is useful to look up every word in a dictionary.	agree	disagree
It is a good idea to check whether you know the exact meaning of every word in a text.	agree	disagree
If you don't understand a sentence, it is useful to reread that sentence.	agree	disagree
When you are reading, it is useful to ask yourself every now and then whether you understand what you are reading or not.	agree	disagree
If you don't understand something in a text, it is useful to read on a little to see if it becomes clearer.	agree	disagree
If you want to find a specific piece of information quickly (e.g.: a name), it is sensible to let your eyes dart over the text until you find the information you are looking for.	agree	disagree
If you don't understand a word in a French text, it is useful to try and guess its meaning from the surrounding words and sentences.	agree	disagree
When you are reading a French text, it is sensible to concentrate on one sentence at a time and to forget about the rest of the text for the moment.	agree	disagree

Demographic and Language Contact Questionnaire

Part I: Background Information

1) Age: _____   2) Sex: F   M

3) Is English your   4) What is your MSU PID (student number
native language?   beginning with A)?

        Y   N

                                   _____

                                   _____

5) Please circle all French classes that you are currently taking at MSU :

			300-level Course number(s):	400-level Course number(s):	Other Course number(s):
102	201	202	_____	_____	_____

6) Have you traveled to   If yes, when?_____
a French-speaking   Where?_____
country for the purpose   Y   N   How long? (circle only one):
of studying French?

                                   1 semester   2 semesters   more than 2
                                   or less   semesters

7) Other than experience mentioned in Question 5, have you ever lived in a situation
where you were exposed to a language other than your native language (e.g., by living
in a multilingual community; visiting a community for the purpose of study abroad or
work; exposure through family members, etc.)?
If yes, please give details below. If more than three, list on the last page of this
questionnaire.

	Experience 1	Experience 2	Experience 3
Country/region			
Language			
Purpose			
From when to when			

8) In the boxes below, rate your language ability in each of the languages that you know. Use the following ratings:

0) Poor, 1) Good, 2) Very Good; 3) Native/nativelike

Language	Listening	Speaking	Reading	Writing	Number of years of study
English					
French					
Other					

9) Have you studied French in school in the past at each of the levels listed below? If yes, for how long?

	Circle one		If "Yes", how many years?
Elementary school	No	Yes	How many years? _____
Middle school	No	Yes	How many years? _____
High school	No	Yes	How many years? _____
University/college	No	Yes	How many years? _____
Other (please specify): _____	No	Yes	How many years? _____

9) What year are you at MSU (circle only one)?

Freshman   Sophomore   Junior   Senior   Graduate   Other

10) What is your major at MSU?

_____

11) Does your major or program of study require you to study a foreign language?

Yes   No

12) If you answered yes to Question 11, would you currently be enrolled in a French class if it were NOT a degree requirement?

Yes   No

13) Please indicate the highest level of French study you intend to complete (circle only one):

FRN 102	FRN 201	FRN 202	at least one 300-level class	at least one 400-level class	at least one 800-level (graduate) class	more than one 800-level (graduate) class

Part II: All of the Questions That Follow Refer to Your Use of *French, Not Your Native Language,* Unless the Question Says Otherwise.

For each of the items below, please circle only one response and then under that response write in the number of hours that you estimate that you personally spend doing each activity.

The following sample response indicates that you communicated with native or fluent speakers about once a week for two hours:

SAMPLE : a. On average, how often did you communicate with native or fluent speakers of French *in French* in the year prior to the start of this semester?

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:____2____	Hours per day:_____

---

14) On average, how often did you communicate with native or fluent speakers of French *in French* in the year prior to the start of this semester?

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

15) Prior to this semester, I tried to speak French to:
   a. my instructor outside of class

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

b. friends who are native or fluent speakers of French

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

c. classmates

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

d. strangers whom I thought could speak French

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

e. a host family, if living in a French-speaking area

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

f. service personnel (e.g., bank clerk, cashier)

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

16) For each of the items below, choose the response that corresponds to the amount of time you estimate you spent doing each activity *in French* prior to this semester.

a. watching French language television

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

b. reading French language newspapers

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

c. reading novels in French

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

d. listening to songs in French

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

e. reading French language magazines

0) Almost never	1) About once a month	2) About once a week	3) Almost every day
	Hours per month:_____	Hours per week:_____	Hours per day:_____

f. watching movies, videos or DVDs in French

| 0)
Almost
never | 1) About once a month

Hours per
month:_____ | 2) About once a week

Hours per
week:_____ | 3) Almost every day

Hours per
day:_____ |

g. browsing French websites

| 0)
Almost
never | 1) About once a month

Hours per
month:_____ | 2) About once a week

Hours per
week:_____ | 3) Almost every day

Hours per
day:_____ |

17) List any other activities you commonly did using French prior to this semester:

Activity/Activities:

| 0)
Almost
never | 1) About once a month

Hours per
month:_____ | 2) About once a week

Hours per
week:_____ | 3) Almost every day

Hours per
day:_____ |

Appendix I

Motivation and Anxiety for L2 Reading and Study Questionnaire

Using the scale below, indicate your agreement with the following statements about reading in French. Circle only one number per statement.

Strongly disagree	Moderately disagree	Somewhat disagree	Somewhat agree	Moderately agree	Strongly agree
1	2	3	4	5	6

1) I like reading in French.
2) It is fun to read in French.
3) I'm interested in reading in French.
4) Even if I were not required to read French, I would take a class where I had to read in French anyway.
5) It is a waste of time to learn to read in French.
6) I am tired of reading in French.
7) It is difficult to read in French.
8) It is boring to read in French.
9) I like reading French novels.
10) I like reading French newspapers and magazines.
11) Reading in French is important because it will broaden my view.
12) Reading in French is important because it will be conducive to my general education.
13) Reading in French is important because it will make me a more knowledgeable person.
14) I am learning to read in French merely because I would like to get good grades.
15) I am learning to read in French because I think it will help my future career.
16) I am learning to read in French because I would like to learn about opinions of various people in the world.
17) I am learning to read in French because it will enable me to read French novels.
18) I am learning to read in French because it will enable me to read French newspapers and magazines.
19) When I see people reading a French magazine or book, I think they are cool and would like to be like them.
20) I am learning to read in French because I because I might work or study in a French-speaking place in the future.
21) I think I am good at reading French.
22) Reading French is a challenge that I enjoy.
23) I get immersed in interesting stories even if they are in French.
24) By learning to read in French, I hope to enhance my ability to browse French websites.
25) I would not voluntarily read in French unless it was required as homework or assignment.
26) I tend to get deeply engaged when I read in French.

27) I do not have any desire to read French even if the content is interesting.
28) I am learning to read in French merely because it is required for graduation.
29) My grades for reading assignments in French have been excellent.
30) Even when reading materials are dull or uninteresting, I always finish the assignments.
31) When I read in French, I feel anxious if I don't know all the words.
32) I prefer to avoid reading in French as much as possible.
33) I feel anxious if I'm not sure whether I understood what I read in French.
34) Reading in French is my hobby.
35) Even if I cannot understand what I read in French completely, it doesn't bother me.
36) I think I can read quickly in French.
37) I think my reading ability in French is advanced.
38) I think I read in French a lot.

Using the scale below, indicate your agreement with the following statements about studying French. Circle only one number per statement.

Strongly disagree	Moderately disagree	Somewhat disagree	Somewhat agree	Moderately agree	Strongly agree
1	2	3	4	5	6

1) I enjoy learning French.
2) Learning French is like a hobby to me.
3) I'm interested in learning French.
4) French is one of the important school subjects.
5) Learning French is useful.
6) I try to study hard in French classes.
7) I would like to continue learning French in the future.
8) I don't like learning French, but I think learning French is important.
9) I lose interest in French classes.
10) I lose concentration in French classes.
11) Learning French is important because it will broaden my view.
12) Learning French is important because it will be conducive to my general education.
13) Learning French is important because it will make me a more knowledgeable person.
14) I am learning French only because it is a required subject.
15) I am learning French because I would like to get good grades.
16) I am learning French because I would like to live or study overseas in the future.
17) I am learning French because it will help me when I travel overseas.
18) I am learning French because it will enable me to understand French novels and movies.
19) I am learning French because it will help me in my future career.
20) I am learning French because I would like to communicate with French-speaking people.
21) I study French according to a preplanned schedule.

22) I try to study hard in French classes.
23) Even when homework in French is tiresome, I will work hard on it.
24) I procrastinate about my homework/assignments in French classes until right before the due date.
25) I work on my French assignments according to a preplanned schedule.
26) Even if there were no homework, I would try to study French outside the class.
27) I work on my assignments just to the extent that I will not fail a French class.
28) I actively participate in French classes.
29) I spend more time studying for French than for other classes.
30) I take a chance in preparing for French tests by only studying what I think is most likely to be asked.
31) I think I am good at French.
32) Studying French is a challenge that I enjoy.
33) I tend to get deeply engaged when I study French.
34) My grades in French have been excellent.
35) I prefer to avoid studying French as much as possible.
36) I feel anxious if I'm not sure whether I understand in French class.
37) Even if I cannot understand French completely, it doesn't bother me.
38) I think my French ability is advanced.
39) I think I study French a lot.
40) I often feel anxious in French class.

Appendix J

Genre Reactions Questionnaire

The following statements have to do with reading different types of texts in French:

> *"Stories"* refers to (excerpts from) short stories, novels, plays, etc.
> *"Informational texts"* refers to (excerpts from) news articles, cultural readings, etc.

Circle only one number per statement.

Strongly disagree	Moderately disagree	Somewhat disagree	Somewhat agree	Moderately agree	Strongly agree
1	2	3	4	5	6

1) I think that stories are difficult to read in French.
2) I think that informational texts are difficult to read in French.
3) I enjoy reading stories in French
4) I enjoy reading informational texts in French.
5) I think reading stories in French is interesting.
6) I think reading informational texts in French is interesting.
7) I think I learn a lot from reading stories in French.
8) I think I learn a lot from reading informational texts in French.
9) I think I am a good reader when I read stories in French.
10) I think I am a good reader when I read informational texts in French.
11) I think it is useful to read stories in French.
12) I think it is useful to read informational texts in French.
13) I am comfortable reading stories in French.
14) I am comfortable reading informational texts in French.
15) I am anxious when I read stories in French.
16) I am anxious when I read informational texts in French.
17) If I had a choice, I would rather read stories than informational texts in French.
18) I think reading stories is boring in French.
19) I think reading informational texts is boring in French.
20) I think I understand a lot when I read stories in French.
21) I think I understand a lot when I read informational texts in French.
22) I think reading stories in French is worthwhile.
23) I think reading informational texts in French is worthwhile.
24) I tend to lose interest when I read stories in French.
25) I tend to lose interest when I read informational texts in French.

Appendix K

Text Reactions Questionnaire

Using the scale below, please answer the following questions about each of the four texts that you read. Circle only one number per question.

Strongly disagree	Moderately disagree	Somewhat disagree	Somewhat agree	Moderately agree	Strongly agree
1	2	3	4	5	6

Les trois motocyclistes

1) This text was difficult.
2) The grammar in this text was difficult.
3) The vocabulary in this text was difficult.
4) I was familiar with the topic of the text.
5) This text was too long.
6) This text was difficult because it was a story.
7) I enjoyed reading this text.
8) The topic of the text was interesting.
9) I experienced positive feelings or emotions when I read this text.
10) I enjoyed reading this text because it was a story.
11) It was useful to read this text.
12) I was comfortable reading this text.
13) I think I understood nearly all of the text.
14) I was anxious when reading this text.
15) I was good at reading this text.
16) I learned something by reading this text.
17) It was a waste of time to read this text.
18) This text was boring.

Please provide any other comments you have about your experience reading *Les trois motocyclistes:*

L'œuf de Pâques

Strongly disagree	Moderately disagree	Somewhat disagree	Somewhat agree	Moderately agree	Strongly agree
1	2	3	4	5	6

1) This text was difficult.
2) The grammar in this text was difficult.
3) The vocabulary in this text was difficult.
4) I was familiar with the topic of the text.
5) This text was too long.
6) This text was difficult because it was a story.

7) I enjoyed reading this text.
8) The topic of the text was interesting.
9) I experienced positive feelings or emotions when I read this text.
10) I enjoyed reading this text because it was a story.
11) It was useful to read this text.
12) I was comfortable reading this text.
13) I think I understood nearly all of the text.
14) I was anxious when reading this text.
15) I was good at reading this text.
16) I learned something by reading this text.
17) It was a waste of time to read this text.
18) This text was boring.

Please provide any other comments you have about your experience reading *L'œuf de Pâques:*

Le café dans la vie des étudiants

Strongly disagree	Moderately disagree	Somewhat disagree	Somewhat agree	Moderately agree	Strongly agree
1	2	3	4	5	6

1) This text was difficult.
2) The grammar in this text was difficult.
3) The vocabulary in this text was difficult.
4) I was familiar with the topic of the text.
5) This text was too long.
6) This text was difficult because it was an informational text.
7) I enjoyed reading this text.
8) The topic of the text was interesting.
9) I experienced positive feelings or emotions when I read this text.
10) I enjoyed reading this text because it was an informational text.
11) It was useful to read this text.
12) I was comfortable reading this text.
13) I think I understood nearly all of the text.
14) I was anxious when reading this text.
15) I was good at reading this text.
16) I learned something by reading this text.
17) It was a waste of time to read this text.
18) This text was boring.

Please provide any other comments you have about your experience reading *Le café dans la vie des étudiants:*

Sport: l'homme sans limites

Strongly disagree	Moderately disagree	Somewhat disagree	Somewhat agree	Moderately agree	Strongly agree
1	2	3	4	5	6

1) This text was difficult.
2) The grammar in this text was difficult.
3) The vocabulary in this text was difficult.
4) I was familiar with the topic of the text.
5) This text was too long.
6) This text was difficult because it was an informational text.
7) I enjoyed reading this text.
8) The topic of the text was interesting.
9) I experienced positive feelings or emotions when I read this text.
10) I enjoyed reading this text because it was an informational text.
11) It was useful to read this text.
12) I was comfortable reading this text.
13) I think I understood nearly all of the text.
14) I was anxious when reading this text.
15) I was good at reading this text.
16) I learned something by reading this text.
17) It was a waste of time to read this text.
18) This text was boring.

Please provide any other comments you have about your experience reading *Sport: l'homme sans limites*:

Appendix L

Inter-item Correlations for Motivation and Anxiety for L2 Study

	1	2	3	7	32	33	5	15	16	17	18
Intrinsic											
1) I enjoy learning French.	0.79										
2) Learning French is like a hobby to me.	0.87	0.77									
3) I'm interested in learning French. future.	0.82	0.73	0.81								
32) Studying French is a challenge that I enjoy.	0.77	0.72	0.70	0.72							
33) I tend to get deeply engaged when I study French.	0.74	0.76	0.69	0.67	0.81						
Extrinsic											
5) Learning French is useful.	0.65	0.58	0.65	0.62	0.55	0.62					
15) I am learning French because I would like to get good grades.	-0.23	-0.27	-0.25	-0.28	-0.25	-0.22	-0.17				
16) I am learning French because I would like to live or study overseas in the future.	0.38	0.42	0.41	0.53	0.38	0.41	0.34	-0.12			
17) I am learning French because it will help me when I travel overseas.	0.46	0.52	0.43	0.58	0.49	0.50	0.47	-0.14	0.74		
18) I am learning French because it will enable me to understand French novels and movies.	0.54	0.57	0.54	0.60	0.58	0.60	0.47	-0.15	0.47	0.60	
19) I am learning French because it will help me in my future career.	0.44	0.49	0.50	0.65	0.44	0.52	0.55	-0.14	0.61	0.61	0.46

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	19	20	9	14	27	35	36	37	40	4	11	12
20) I am learning French because I would like to communicate with French-speaking people.	0.80											
Amotivation												
9) I lose interest in French classes.	-0.29	-0.46										
14) I am learning French only because it is a required subject.	-0.47	-0.64	0.44									
27) I work on my assignments just to the extent that I will not fail a French class.	-0.27	-0.36	0.35	0.39								
35) I prefer to avoid studying French as much as possible.	-0.47	-0.58	0.52	0.61	0.55							
Anxiety												
36) I feel anxious if I'm not sure whether I understand in French class.	0.01	-0.08	0.28	0.11	0.16	0.25						
37) Even if I cannot understand French completely, it doesn't bother me.*	0.00	-0.02	0.07	-0.05	0.00	0.04	0.50					
40) I often feel anxious in French class.	-0.07	-0.19	0.37	0.21	0.26	0.32	0.62	0.44				
Importance												
4) French is one of the important school subjects.	0.57	0.60	-0.43	-0.52	-0.29	-0.43	-0.03	-0.07	-0.16			
11) Learning French is important because it will broaden my view.	0.51	0.52	-0.25	-0.31	-0.28	-0.40	-0.01	-0.11	-0.03	0.52		
12) Learning French is important because it will be conducive to my general education.	0.55	0.53	-0.24	-0.38	-0.15	-0.29	0.04	-0.10	-0.11	0.59	0.68	
13) Learning French is important because it will make me a more knowledgeable person.	0.52	0.54	-0.22	-0.34	-0.17	-0.31	0.05	-0.12	-0.19	0.49	0.73	0.78

	13	31	34	38	6	10	21	23	24	25	26	28
Self-Perceived Ability												
31) I think I am good at French.	0.40											
34) My grades in French have been excellent.	0.36	0.71										
38) I think my French ability is advanced.	0.37	0.79	0.56									
Study Habits												
6) I try to study hard in French classes.	0.23	0.25	0.16	0.24								
10) I lose concentration in French classes.*	0.19	0.39	0.49	0.31	0.28							
21) I study French according to a preplanned schedule.	0.09	0.12	0.07	0.11	0.32	0.03						
23) Even when homework in French is tiresome, I will work hard on it.	0.31	0.25	0.25	0.23	0.74	0.39	0.27					
24) I procrastinate about my homework/assignments in French classes until right before the due date.*	-0.05	0.04	0.07	-0.04	0.36	0.20	0.04	0.42				
25) I work on my French assignments according to a preplanned schedule.	0.07	0.09	0.11	0.08	0.30	0.10	0.56	0.28	0.22			
26) Even if there were no homework, I would try to study French outside the class.	0.25	0.27	0.20	0.31	0.51	0.23	0.29	0.50	0.21	0.20		
28) I actively participate in French classes.	0.36	0.55	0.49	0.44	0.13	0.30	0.00	0.12	0.03	-0.06	0.26	
29) I spend more time studying for French than for other classes.	-0.01	0.08	-0.11	0.10	0.39	0.07	0.21	0.32	0.09	0.09	0.32	0.06

	29	30
30) I take a chance in preparing for French tests by only studying what I think is most likely to be asked.*	0.13	
39) I think I study French a lot.	0.45	0.25

Note. Items marked with an asterisk (*) are reverse scored. Correlations are statistically significant at .16 for the .05 level and at .21 for the .01 level.

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Appendix M

Inter-item Correlations for Motivation and Anxiety for L2 Reading

	1	2	3	4	9	10	16	22	23	26
Intrinsic										
1) I like reading in French.										
2) It is fun to read in French.	0.92									
3) I'm interested in reading in French.	0.80	0.79								
4) Even if I were not required to read French, I would take a class where I had to read in French anyway.	0.63	0.65	0.76							
9) I like reading French novels.	0.58	0.58	0.62	0.60						
10) I like reading French newspapers and magazines.	0.50	0.52	0.57	0.54	0.54					
16) I am learning to read in French because I would like to learn about opinions of various people in the world.	0.52	0.48	0.59	0.56	0.49	0.42				
22) Reading French is a challenge that I enjoy.	0.73	0.73	0.80	0.66	0.60	0.51	0.54			
23) I get immersed in interesting stories even if they are in French.	0.53	0.58	0.51	0.51	0.66	0.46	0.51	0.51		
26) I tend to get deeply engaged when I read in French.	0.57	0.60	0.59	0.57	0.64	0.56	0.66	0.59	0.60	
30) Even when reading materials are dull or uninteresting, I always finish the assignments.	0.12	0.09	0.10	0.03	0.08	0.06	0.11	0.11	0.00	0.06

	30	34	15	17	18	19	20	24	5	6
34) Reading in French is my hobby.	0.07									
Extrinsic										
15) I am learning to read in French because I think it will help my future career.	0.16	0.25								
17) I am learning to read in French because it will enable me to read French novels.	0.04	0.59	0.38							
18) I am learning to read in French because it will enable me to read French newspapers and magazines.	0.08	0.50	0.42	0.84						
19) When I see people reading a French magazine or book, I think they are cool and would like to be like them.	0.07	0.39	0.29	0.43	0.50					
20) I am learning to read in French because I might work or study in a French-speaking place in the future.	0.08	0.37	0.63	0.46	0.49	0.35				
24) By learning to read in French, I hope to enhance my ability to browse French websites.	0.09	0.52	0.46	0.58	0.69	0.43	0.52			
Amotivation										
5) It is a waste of time to learn to read in French.	-0.12	-0.30	-0.20	-0.34	-0.32	-0.27	-0.36	-0.25		
6) I am tired of reading in French.	-0.05	-0.34	-0.30	-0.46	-0.44	-0.23	-0.33	-0.35	0.38	
8) It is boring to read in French.	-0.11	-0.32	-0.28	-0.31	-0.27	-0.18	-0.22	-0.21	0.44	0.51

	8	14	25	27	28	32	31	33	35	11
14) I am learning to read in French merely because I would like to get good grades.	0.24									
25) I would not voluntarily read in French unless it was required as homework or assignment.	0.47	0.36								
27) I do not have any desire to read French even if the content is interesting.	0.49	0.28	0.65							
28) I am learning to read in French merely because it is required for graduation.	0.44	0.51	0.53	0.47						
32) I prefer to avoid reading in French as much as possible.	0.54	0.34	0.56	0.53	0.49					
Anxiety										
31) When I read in French, I feel anxious if I don't know all the words.	0.01	0.19	0.16	0.18	0.12	0.22				
33) I feel anxious if I'm not sure whether I understood what I read in French.	0.05	0.14	0.12	0.11	0.00	0.19	0.72			
35) Even if I cannot understand what I read in French completely, it doesn't bother me.*	0.02	0.03	0.08	0.05	-0.07	0.11	0.40	0.47		
Importance										
11) Reading in French is important because it will broaden my view.	-0.20	-0.23	-0.17	-0.21	-0.34	-0.20	-0.02	0.11	-0.11	
12) Reading in French is important because it will be conducive to my general education.	-0.25	-0.24	-0.23	-0.25	-0.39	-0.25	-0.05	0.09	-0.12	0.75

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	12	13	7	21	29	36	37
Self-Perceived Ability							
7) It is difficult to read in French.*	0.02	-0.09					
21) I think I am good at reading French.	0.19	0.18	0.30				
29) My grades for reading assignments in French have been excellent.	0.20	0.20	0.30	0.58			
36) I think I can read quickly in French.	0.18	0.13	0.35	0.67	0.56		
37) I think my reading ability in French is advanced.	0.23	0.16	0.32	0.77	0.54	0.72	
38) I think I read in French a lot.	0.28	0.22	0.29	0.58	0.49	0.56	0.74

Note. Items marked with an asterisk (*) are reverse scored. Correlations are statistically significant at .16 for the .05 level and at .21 for the .01 level.

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Text Comments

Narrative Text 1 (*The Three Motorcyclists*)

I remembered this one the best.

Of all the text (*sic*) I read in this handout, "Les trois motocyclistes" was the text I understood the most.

Of the four texts, I found this one to be the easiest to read and understand.

The language seemed more simple than most texts which made it easier to follow.

This was the easiest to read, I knew a lot of the vocab and the storyline was pretty easy to follow.

Very clear details.

It was easier to remember because if was story-like.

I liked it because it was a chain of events rather than a bunch of information.

I liked this excerpt the best b/c it was more of an actual story.

It was a cute story, I liked it.

It was a cute little story.

I really liked this story.

I found it interesting, but mostly because I go camping every year in Canada, near/on dunes of Lake Huron.

I liked it. The way the author described the 3 motorcyclists when they were coming toward the narrator was cool.

I liked it, I just don't know if I got it all, were the three motorcyclist (*sic*) part of the 9 campers?

I found it hardest to remember names from the story and events that happened in the middle paragraph.

In all honesty, I had no idea what 3 motorcyclists had to do with the 9 people camping or what the narrator though when he/she saw them.

This I think was the hardest one for me unfamiliar w/ a good amount of the words.

I don't know, I didn't get all the vocab, so I'm sure I missed something. The grammar wasn't hard to understand, though.

Some difficult grammar/vocabulary made the point hard to understand.

Understood only parts of the story.

I didn't understand much of the text.

This one was very difficult for me. I realize how poor my French literacy skills are.

I can catch words and phrases, but I can't comprehend many full sentences.

There were a few words I didn't understand.

I did not understand the part when the motorcycles came down the dune.

I didn't know much camping terminology the 3 people confused me a little.

This story from what I could read was really weird.

Wonder why part was in English.

I noticed French-Canadian"isms".

This was the easiest one for me.

I found some of the details from this story easier to remember because there were dates and numbers and direct quotes that I could remember. Plus I liked this story the most!

This text was also easier to remember because it was a story

Cute story

It was a cute story!

Such a cute idea! Made me smile.

This was my favorite!

I liked the story and I think it's cute that every year the husband continues with the tradition he started with hiding a chocolate egg for his wife.

Loved the story and am familiar with Easter traditions.

I enjoyed this text because I had personal connections to it. My brother and I hide things on each others birthdays w/ surprises or notes that say "good for..."

I liked this story for the most part. I wish I could have understood more of it. :(

I want to know this story. I would like to hear it in English to understand it because it sounded interesting and I think the point was lost on me.

Cute story but I might have misunderstood a few sentences, I think.

I don't think I really understood what it was about.

This text gave me the most problems in understanding what the story was about.

This was the hardest story for me to understand and I don't think I got a lot of it.

I had a harder time understanding this text...I'm not sure why.

The whole middle of the story is pretty much a blur because I couldn't understand most of it. It was somewhat boring because I couldn't understand most of it.

Hard to tell what the main point of the story was about.

I didn't understand a lot of the vocabulary, so I was lost.

I don't really know what was going on here, because I don't know what cachait (or any of its forms) means. I just couldn't follow this.

I can only gather tidbits. I only caught some vocab words in this one.

I don't understand some of the vocab.

Was nice to understand all of a story but do not know what Pâques is

I wish I knew what Pâque (*sic*) was - no, wait I do it's easter (*sic*). Oops!

Sorry, forgot what a lot of the vocab meant

Eggs and chocolate were pretty much all I remember, however this was the first story so I don't think I read it "right"/as critically as the others. Although of all the 4 stories I thought this was the most difficult.

Expository Text 1 (*The Café in Student Life*)

I thought this text was easier to read (possibly because it wasn't a story/it was more interesting to me)

Out of all the texts this one was the easiest for me to understand. Perhaps because it wasn't a story with a lot of details to try to remember I was better able to understand the main point. Also, I think the vocabulary and grammar were at the right level.

Understood basic concept, but unclear about some parts

This wasn't too hard, it's just hard to remember every detail.

I liked it but I have questions.

I really liked this text.

I could relate to this story.

Could relate to this story

It was a good text because college kids can relate to it somewhat.

I understood some of this and found it more intresting (*sic*) because of the culture-base of the text.

I also had personal memories of sitting in European cafes meeting people and studying so I enjoyed it because I recalled those fun times.

I understood this less, and remembered less than the others.

The hardest to understand because of the grammar/vocab I did not know many of the phrases

The vocab was difficult for me so I struggled w/ what was going on.

For me it was hard to think of specific details for this text because most of the information seemed to be general ideas.

Seemed to have less detail/info than others.

I didn't know students in France spent so much time in cafes. But I guess American students do spend a fair amount of time in coffee shops.

I knew cafes were important in France, but I didn't know that they had their own personalities. They are kind of like bars over here in the U.S.

It's cool to think about kids in France @ a coffee shop like we do @ MSU. But they are halfway around the world.

I assumed we were reading mostly about French students, however I think the story is applicable to students in the U.S. as well.

Expository Text 2 (*Sports: Man Without Limits*)

Didn't get everything, but I think I got the point.

This story/article was interesting to me.

The Olympics are always interesting to me.

Another one I understood better than the stories. The link between the 19th century and technology made it a little harder to understand the main point but again vocabulary and grammar were fine.

This was also a difficult one partially because it was informational and I lost interest.

This text gave me some problems in the translation.

This was the most difficult text.

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This one was the hardest of all.

Did not understand very well.

Do not understand anything in this text at all.

This was the hardest for me to read and understand.

I tried to understand this more because I love the Olympics but it was still difficult.

This one was hardest for me to remember (maybe because it was first) but also because it seemed like the first paragraph talked about a different aspect than the next 2 paragraphs. There was just more to think about than for the stories.

My least favorite of the four texts.

It made me think of the gatorade [*sic*] commercials with the athletes on the treadmills, and they are monitoring their performance.

References

Aida, Y. (1994). Examination of Horwitz, Horwitz and Cope's construct of foreign language anxiety: The case of students of Japanese. *The Modern Language Journal, 78*, 155-68.

Alderson, J.C., Clapham, C., & Steel, D. (1997). Metalinguistic knowledge, language aptitude and language proficiency. *Language Teaching Research, 1*, 93-121.

Allen, E.D., Bernhardt, E.B., Berry, M.T., & Demel, M. (1988). Comprehension and text genre: An analysis of secondary school foreign language readers. *The Modern Language Journal, 72*, 163-72.

Argaman, O., & Abu-Rabia, S. (2002). The influence of language anxiety on English reading and writing tasks among native Hebrew speakers. *Language, Culture and Curriculum, 15*, 143-60.

Bamford, J., & Day, R.R. (2004) *Extensive reading activities for language teachers*. Cambridge: Cambridge University Press.

Baker, L., & Wigfield, A. (1999). Dimensions of children's motivation for reading and their relations to reading activity and reading achievement. *Reading Research Quarterly, 34*, 452-77.

Barry, S., & Lazarte, A. (1998). Evidence for mental models: How do prior knowledge, syntactic complexity, and reading topic affect inference generation in a recall task for non-native readers of Spanish? *The Modern Language Journal, 82*, 176-93.

Bensoussan, M. (1990). EFL reading seen through translation and discourse analysis: Narrative vs. expository texts. *English for Specific Purposes, 9*, 49-66.

Bernhardt, E. (1991). *Reading and development in second language: Theoretical, empirical and classroom perspectives*. Norwood, NJ: Ablex.

Bernhardt, E. (2005). Progress and procrastination in second language reading. *Annual Review of Applied Linguistics, 25*, 133-50.

Bernhardt, E.B., & Kamil, M.L. (1995). Interpreting relationships between L1 and L2 reading: Consolidating the linguistic threshold and the linguistic interdependence hypotheses. *Applied Linguistics, 16,* 15-34.

Bollen, K.A., & Long, J.S. (1993). *Testing structural equation models.* Newbury Park, CA: Sage.

Bossers, B. (1991). On thresholds, ceilings and short circuits: The relation between L1 reading, L2 reading and L2 knowledge. *AILA Review, 8,* 45-60.

Bowers, P., Golden, J., Kennedy, A., & Young, A. (1994). Limits upon orthographic knowledge due to processes indexed by naming speed. In V.W. Berninger (Ed.), *The varieties of orthographic knowledge I: Theoretical and developmental issues* (pp. 173-218). Dordrecht, the Netherlands: Kluwer.

Brantmeier, C. (2005) Nonlinguistic variables in advanced second-language reading: learners' self-assessment and enjoyment. *Foreign Language Annals, 38,* 494-504.

Brantmeier, C. (2006). Toward a multicomponential model of interest and L2 reading: Sources of interest, perceived situational interest, and comprehension. *Reading in a Foreign Language, 18,* 89-115.

Brisbois, J.E. (1995). Connections between first- and second-language reading. *Journal of Reading Behavior, 27,* 565-84.

Brown, H.D. (2007). *Principles of language teaching and learning* (5th ed.). New York: Pearson Education.

Bullock, B., & Lantolf, J.P. (1987). Cloze testing and text genre. *Rassegna italiana di linguistica applicata, 19,* 95-104.

Byrne, B.M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming.* Mahwah, NJ: Lawrence Erlbaum Associates.

Carrell, P. (1987). Content and formal schemata in ESL reading. *TESOL Quarterly, 21,* 461-81.

Carrell, P.L. (1989). Metacognitive awareness and second language reading. *The Modern Language Journal, 73,* 121-34.

Carrell, P.L. (1991). Second language reading: reading ability of language proficiency? *Applied Linguistics, 12,* 159-79.

Carrell, P.L. (1998). Can reading strategies be successfully taught? *Australian Review of Applied Linguistics, 21,* 1-20.

Carrell, P., Devine, J., & Eskey, D. (1988). *Interactive approaches to second language reading.* Cambridge: Cambridge University Press.

Chen, Q., & Donin, J. (1997). Discourse processing of first and second language biology texts: Effects of language proficiency and domain-specific knowledge. *Modern Language Journal, 81,* 209-227.

Chin, H.K., & Bandari, R. (2007) *Open doors 2007: Report on international educational exchange.* New York: Institute of International Education.

Clément, R., Dörnyei, Z., & Noels, K. (1994). Motivation, self-confidence and group cohesion in the foreign language classroom. *Language Learning,* 44, 417-48.

Clément, R., & Kruidenier, B.G. (1985). Aptitude, attitude and motivation in second language proficiency: a test of Clément's model. *Journal of Language and Social Psychology,* 4, 21-37.

Cobb, T. (2006) Web VP en français v.2.5. [Computer program]. Retrieved April 27, 2006, from http://www.lextutor.ca/vp/fr/

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112, 155-9.*

College Board. (n.d.) *SAT-ACT Concordance Tables.* Retrieved May 20, 2008 from http://www.collegeboard.com/prod_downloads/highered/ra/sat/satACT_concorda nce.pdf

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Constantino, R., Lee, S., Cho, K., & Krashen S. (1997). Free voluntary reading as a predictor of TOEFL scores. *Applied Language Learning, 8,* 111-18.

Csizér, K., & Dörnyei, Z. (2005). The internal structure of language learning motivation and its relationship with language choice and learning effort. *The Modern Language Journal, 89,* 19-36.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* New York: Plenum.

Dewey, D.P. (2004). A comparison of reading development by learners of Japanese in intensive domestic immersion and study abroad contexts. *Studies in Second Language Acquisition, 26,* 303-27.

Dörnyei, Z. (1990). Conceptualizing motivation in foreign-language learning. *Language Learning, 40,* 45-78.

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition.* Mahwah, NJ: Lawrence Erlbaum Associates.

Dörnyei, Z., & Kormos, J. (2000). The role of individual and social variables in task performance. *Language Teaching Research, 4,* 275-300.

DuBravac, S., & Dalle, M. (2002). Reader question formation as a tool for measuring comprehension: narrative and expository textual inferences in a second language. *Journal in Research of Reading, 25,* 217-31.

Ehrman, M.E., & Oxford, R.L. (1995). Cognition plus: Correlates of language learning success. *The Modern Language Journal, 79,* 67-89.

Elkhafaifi, H. (2005). The effect of prelistening activities on listening comprehension in Arabic learners. *Foreign Language Annals, 38,* 505- 13.

Ellis, N.C. (2002) Frequency effects in language processing. *Studies in Second Language Acquisition, 24,* 143-88.

239

Ellis, R. (2008). *Study of second language acquisition*. Oxford: Oxford University Press.

Elley, W.B. (1991). Acquiring literacy in a second language: the effect of book-based programs. *Language Learning, 41,* 375-411.

Elley, W.B., & Mangubhai, F. (1983). The impact of reading on second language learning. *Reading Research Quarterly, 19,* 53-67.

Fecteau, M.L. (1999). First- and second-language reading comprehension of literary texts. *The Modern Language Journal, 83,* 475-93.

Frantzen, D. (2002) Rethinking foreign language literature: Towards an integration of literature and language at all levels. In V. Scott & H. Tucker (Eds.) *SLA and the literature classroom: Fostering dialogues* (pp. 109-30). Boston: Heinle.

Freed, B.F., Dewey, D. P., Segalowitz, N., & Halter, R. (2004). The language contact profile. *Studies in Second Language Acquisition, 26,* 349-56.

Ganschow, L., & Sparks, R. (1996). Anxiety about foreign language learning among high school women. *The Modern Language Journal, 80,* 200-12.

Ganschow, L., Sparks, R.L., Anderson, R., Javorshy, J. Skinner, S., & Patton, J. (1994). Differences in language performance among high-, average-, and low-anxious college foreign language learners. *The Modern Language Journal, 78,* 41-55.

Gardner, R.C. (1985). *Social psychology and second language learning: The role of attitudes and motivation.* London: Edward Arnold Publishers.

Gardner, R. C., Lalonde, R. N., Moorcroft, R., & Evers, F. T. (1987). Second language attrition: The role of motivation and use. *Journal of Language and Social Psychology, 6,* 29-47.

Gardner, R.C., & Lambert, W.E. (1959). Motivational variables in second language acquisition. *Canadian Journal of Psychology,* 13, 266-72.

Gardner, R.C., & Lambert, W.E. (1972). *Attitudes and motivation in second language learning*. Rowley, MA: Newbury House Publishers.

Gardner, R.C., & MacIntyre, P.D. (1991). An instrumental motivation in language study: Who says it isn't effective? *Studies in Second Language Acquisition, 13,* 57-72.

Gardner, R.C., & MacIntyre, P.D. (1993). A student's contribution to second- language learning. Part II: Affective variables. *Language Teaching, 26,* 1-11.

Gardner, R.C., Tremblay, P., & Masgoret, A.M. (1997). Towards a full model of second language learning: An empirical investigation. *The Modern Language Journal, 81,* 344-62.

Garner, R. (1994). Metacognition and executive control. In R.B. Ruddell, M.R. Riddel & H. Singer (Eds.) *Theoretical models and processes of reading* (4th ed.) (715-32). Newark, DE: International Reading Association.

Garson, G.D. (2008). Factor analysis. *Statnotes: Topics in Multivariate Analysis*. Retrieved May 30, 2008 from http://www2.chass.ncsu.edu/garson/pa765/statnote.htm

Gass, S.M., & Selinker, L. *Second language acquisition: An introductory course* (3rd ed.). New York: Routledge.

Gelderen, A. van, Schoonen, R., Glopper, K. de, Hulstijn, J., Simis, A., Snellings, P., & Stevenson, M. (2004). Linguistic knowledge, processing speed, and metacognitive knowledge in first- and second-language reading comprehension: a componential analysis. *Journal of Educational Psychology, 96,* 19-30.

Goodfellow, R., Jones, G., & Lamy, M.N. (2002). Assessing learners' writing using Lexical Frequency Profile. *ReCALL, 14,* 129-42.

Gottfried, A.E. (1990). Academic intrinsic motivation in young elementary school children. *Journal of Educational Psychology, 82,* 525-38.

Grabe, W., & Stoller, F.L. (2002) *Teaching and researching reading.* New York: Pearson Education.

Graesser, A., Golding, J.M., & Long, D.L. (1991). Narrative representation and comprehension. In R. Barr, M.L. Kamil, P. Mosenthal, & P.D. Pearson (Ed.), *Handbook of reading research* (Vol. 2, pp. 171-205). New York: Longman.

Graesser, A. C., Hauft-Smith, K., Cohen, A.D., & Pyles, L.D. (1980). Advanced outlines, familiarity, text genre and retention of prose. *Journal of Experimental Education, 48, 209-20.*

Gregg, K. (1984). Krashen's monitor and Occam's razor. *Applied Linguistics, 5,* 79-100.

Guthrie, J. T., McGough, K., & Wigfield, A. (1994). *Measuring reading activity: An inventory* (Instructional Resource No. 4). Athens, GA: National Reading Research Center.

Guthrie, J.T., Wigfield, A., Metsala, J.L., & Cox, K.E. (1999). Motivational and cognitive predictors of text comprehension and reading amount. *Scientific Studies of Reading, 3,* 231-56.

Haggstrom, M.A. (1993). Study strategies for the beginning foreign language classroom. *The Canadian Modern Language Review, 49,* 236-54.

Holmes, R., & Omar, M. (2006). Adjunct language instruction: Modeling student perceptions. *ITL Review of Applied Linguistics, 151,* 57-82.

Horiba, Y. (1990). Narrative comprehension processes: A study of native and non-native readers of Japanese. *Modern Language Journal, 74,* 188-202.

Horwitz, E. (2001). Language anxiety and achievement. *Annual Review of Applied Linguistics, 21,* 112-26.

Horwitz, E.K., Horwitz, M.B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal, 70,* 125-32.

Horwitz, E.K., & Young, D.J. (1991). *Language anxiety: From theory and research to classroom implications.* Englewood Cliffs, NJ: Prentice Hall.

In'nami, Y. (2006). The effects of test anxiety on listening test performance. *System, 24,* 317-40.

Jurasek, B.S., & Jurasek, R.T. (1991). Building multiple proficiencies in new curricular contexts. In J.K. Phillips (Ed.) *Building bridges and making connections* (pp. 89-121). Burlington, VT: Northeast Conference Reports.

Kim, H., & Krashen, S. (1997). Why don't language acquirers take advantage of the power of reading? *TESOL Journal, 6,* 26-9.

Kintsch, W. (1988). The role of knowledge in discourse comprehension: A construction-integration Model. *Psychological Review, 95,* 163-82.

Kintsch, W. (1998). *Comprehension: A paradigm for cognition.* Cambridge: Cambridge University Press.

Kintsch, W., & Young, S.R. (1984). Selective recall of decision- relevant information from texts. *Memory and Cognition,* 12, 112–17.

Kline, R.B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford.

Koda, K. (2005). *Insights into second language reading: A cross-linguistic approach.* Cambridge: Cambridge University Press.

Kondo-Brown, K. (2006) Affective variables and Japanese L2 reading ability. *Reading in a Foreign Language, 18,* 55-71.

Kozminsky, E. (1977). Altering comprehension: The effects of biasing titles on text comprehension. *Memory and Cognition, 54,* 482-90.

243

Krashen, S.D. (1982). *Principles and practice in second language acquisition.* New York: Pergamon.

Krashen, S.D. (1985). *The input hypothesis.* London: Longman.

Lamb, M. (2004). Integrative motivation in a globalizing world. *System, 32,* 3-19.

Larsen-Freeman, D., & Long, M. H. (1991). *An introduction to second language acquisition research.* New York: Longman.

Larson, M.L. (1984). *Meaning-based translation: A guide to cross-language equivalence.* Lanham, MD: University Press of America.

Lee, J.F. (1986). Findings and implications of L2 reading research. *Hispania, 69,* 181-87.

Lee, J.F. (1986a). On the use of the recall task to measure L2 reading comprehension. *Studies in Second Language Acquisition, 8,* 83-93.

Lee, J., & Schallert, D.L. (1997) The relative contribution of L2 language proficiency and L1 reading ability to L2 reading performance: A test of the threshold hypothesis in an EFL context. *TESOL Quarterly, 31,* 713-39.

Lee, J. F., & VanPatten, B. (2003). *Making communicative language teaching happen* (2nd ed.). New York: McGraw Hill.

Lee, S. (2005). Facilitating and inhibiting factors in English as a foreign language writing performance: A model testing with structural equation modeling. *Language Learning, 55,* 335-74.

MacIntyre, P., & Noels, K. (1994). Retrospective review article: The good language learner. *System, 22,* 269-80.

McDevitt, B. (1997). Learner autonomy and the need for learner training. *Language Learning Journal, 16,* 34-9.

McLaughlin, B. (1987). *Theories of second-language learning.* London: Edward Arnold.

Mochida, K., & Harrington, M. (2006). The yes/no test as a measure of receptive vocabulary knowledge. *Language Testing, 23,* 73-98.

Monmouth College Office of Student Affairs (n.d.). *Study skills resources: Foreign language.* Retrieved September 30, 2008 from http://www.monm.edu/study-skills/foreign-language.htm

Mori, S. (2002). Redefining motivation to read in a foreign language. *Reading in a Foreign Language, 14,* 91-110.

Mori, S. (2004) Significant motivational predictors of the amount of reading by EFL learners in Japan. *RELC Journal, 35,* 63-81.

Noels, K.A. (2001). New orientations in language learning motivation: Towards a model of intrinsic, extrinsic and integrative orientations and motivation. In Z. Dörnyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (pp. 43-68). Honolulu: University of Hawaii Press.

Noels, K. A., Clement, R., & Pelletier, L. G. (1999). Perceptions of teachers' communicative style and students' intrinsic and extrinsic motivation. *The Modern Language Journal, 83,* 23-34.

Noels, K.A., Clément, R., & Pelletier L.G. (2001). Intrinsic, extrinsic and integrative orientations of French Canadian learners of English. *Canadian Modern Language Review, 57,* 424-42.

Noels, K.A., Pelletier, L. G., Clément, R., & Vallerand, R.J. (2000) Why are you learning a second language? Motivation orientation and self-determination theory. *Language Learning, 50,* 57-85.

Nunnally, J.C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw Hill.

245

Passow, A. H. (1995). Review of the Enhanced ACT Assessment. In J. C. Conoley & J. C. Impara (Eds.), *The twelfth mental measurements yearbook* (pp. 355–58). Lincoln, NE: University of Nebraska Press.

Paesani, K. (2004). Using literature to develop foreign language proficiency: toward an interactive classroom. In C. Stivale (Ed.), *Modern French Literary Studies in the Classroom: Pedagogical Strategies* (pp. 13-25). New York: Modern Language Association.

Petros T.V., Norgaard L., Olson, K., & Tabor, L. (1989). Effects of text genre and verbal ability on adult age differences in sensitivity to text structure. *Psychology and Aging, 4,* 247-50.

Plant, E.A., Ericsson, K.A., Hill, K., & Asberg, K. (2004). Why study time does not predict grade point average across college students: implications of deliberate practice for academic performance. *Contemporary Educational Psychology, 30,* 96-116.

Proctor, C.P., August, D., Carlo, M., & Snow, C. (2005). Native Spanish-speaking children reading in English: toward a model of comprehension. *Journal of Educational Psychology, 97,* 246-56.

Pulido, D. (2004). The relationship between text comprehension and second language incidental vocabulary acquisition: A matter of topic familiarity? *Language Learning, 54,* 469-523.

Pulido, D., & Hambrick, D.Z. (2008). The virtuous circle: Modeling individual differences in L2 reading and vocabulary development. *Reading in a Foreign Language, 20,* 164-90.

Raubenheimer, J. E. (2004). An item selection procedure to maximize scale reliability and validity. *South African Journal of Industrial Psychology, 30,* 59-64.

Saito, Y., Horwitz, E., & Garza, T. (1999) Foreign language reading anxiety. *The Modern Language Journal, 83,* 202-18.

Saito, Y., & Samimy, K.K. (1996) Foreign language anxiety and language performance: A study of learner anxiety in beginning, intermediate, and advanced-level college students of Japanese. *Foreign Language Annals 29,* 239-51.

Samimy, K.K. ,& Tabuse, M. (1992). Affective variables and a less commonly taught language: A study in beginning Japanese classes. *Language Learning, 42,* 377-98.

Schoonen, R., Gelderen, A. van, Glopper, K. de, Hulstijn, J., Simis, A., Snellings, P., & Stevenson, M. (2002). Linguistic knowledge, metacognitive knowledge and retrieval speed in L1, L2 and EFL writing. In S. Ransdell & M. Barbier (Eds.), *New directions for research in L2 writing* (pp. 101-122). Dordrecht: Kluwer Academic Publishers.

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 grades 6, 8 and 10. *Language Learning, 48,* 71-106.

Scovel, T. (1978). The effect of affect on foreign language learning: A review of the anxiety research. *Language Learning, 28,* 129-42.

Seattle Language Academy (n.d.). *Foreign language programs FAQ.* Retrieved September 30, 2008 from http://www.seattlelanguageacademy.org/flp/flp_faq.asp

Sellers, V. (2000). Anxiety and reading comprehension in Spanish as a foreign language. *Foreign Language Annals, 33,* 512-21.

Share, D., & Stanovich, K.E. (1995), Cognitive processes in early reading development: Accommodating individual differences into a model of acquisition. In J.S. Carlson (Ed.,), *Issues in education: Contributions from psychology* (Vol. 1, pp. 1-57). Greenwich, CT: JAI Press.

Sparks, R.L., & Ganschow, L. (1991). Foreign language learning differences: Affective or native language aptitude differences? *The Modern Language Journal, 75,* 3-16.

Stanovich, K.E. (1986). Matthew effects in reading: some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly, 21,* 360-407.

Tang, H.N., & Moore, D.W. (1992). Effects of cognitive and metacognitive pre-reading activities on the reading comprehension of ESL learners. *Educational psychology, 12,* 315-331.

Tremblay, P.F., & Gardner, R.C. (1995). Expanding the motivation construct in second language learning. *The Modern Language Journal, 79,* 505-18.

Tun, P.A. (1989). Age differences in processing expository and narrative text. *Journal of Gerontology, 44,* 9-15.

Ullman, J.B., & Bentler, P.M. (2004). Structural equation modeling. In M.A. Hardy & A. Bryman (Eds.) *Handbook of data analysis* (pp. 431-58). Thousand Oaks, CA: Sage.

University of Wollongong School of English Literatures, Philosophy & Languages (n.d.). *Ten foreign language study tips.* Retrieved September 30, 2008 from http://www.uow.edu.au/arts/selpl/ml/UOW018798.html

Vallerand, R.J., Blais, M. R., Brière, N.M., & Pelletier, L.G. (1989). Construction et validation d'une échelle de motivation en éducation (EME). *Canadian Journal of Behavioral Sciences, 21,* 323-49.

Vallerand, R.J., Pelletier, L.G., Blais, M.R., Brière, N.M., Senécal, C.B., & Vallières, E.F. (1992). The academic motivation scale: A measure of intrinsic, extrinsic and amotivation in education. *Educational and Psychological Measurement, 52,* 1003-17.

Vallerand, R.J., Pelletier, L.G., Blais, M.R., Brière, N.M., Senécal, C.B., & Vallières, E.F. (1993). On the assessment of intrinsic, extrinsic and amotivation in education: Evidence on the concurrent and construct validity of the academic motivation scale. *Educational and Psychological Measurement, 53,* 159-72.

Vandergrift, L. (1997). The comprehension strategies of second language (French) listeners: A descriptive study. *Foreign Language Annals, 30,* 387-409.

Wagner, R.K., Torgeson, J.K., & Rashotte, C.A. (1994). The development of reading-related phonological processing abilities: New evidence of bidirectional causality from a latent variable longitudinal study. *Developmental Psychology, 30,* 73-87.

Weaver, C.A. III, & Kintsch, W. (1991) Expository text. In R. Barr, M.L. Kamil, P. Mosenthal, & P.D. Pearson (Ed.), *Handbook of reading research* (Vol. 2, pp. 230-246). New York: Longman.

Wen, X. (1997). Motivation and language learning with students of Chinese. *Foreign Language Annals, 30,* 235-51.

Wenden, A.L. (1999). An introduction to metacognitive knowledge and beliefs in language learning: beyond the basics. *System, 27,* 435-41.

Woodrow, L.J. (2006). A model of adaptive second language learning, *The Modern Language Journal, 90,* 297-319.

X_Lex: the Swansea Vocabulary Levels Test. v2.05. Swansea: Lognostics. 2005.

Yamashiro, A., & McLaughlin, J. (2000). Relationships among attitudes, motivation, anxiety and English language proficiency in Japanese college students. In S. Cornwell & P. Robinson (Eds.), *Individual differences in foreign language learning: Proceedings of the symposium on intelligence, aptitude and motivation* (pp. 9-26). Tokyo: Aoyama Gakuin University.

Yamashita, J. (2004). Reading attitudes in L1 and L2, and their influence on extensive reading in L2. *Reading in a Foreign Language, 16,* 1-19.

Yashima, T., Zenuk-Nishide, L., & Shimizu, K. (2004). The influence of attitudes and affect on willingness to communicate and second language communication. *Language Learning, 54,* 119-52.

Yazzie-Mitz, E. (2007). *Voices of students on engagement: A report on the 2006 high school survey of student engagement.* Retrieved October 24, 2008, from http://ceep.indiana.edu/hssse/pdf/HSSSE_2006_Report.pdf

Young, D. J. (1986). The relationship between anxiety and foreign. language oral proficiency ratings. *Foreign Language Annals, 19*, 439-45.

Young, D. J. (1999). Linguistic simplification of SL reading material: Effective instructional practice? *Modern Language Journal, 83*, 350-66.

Zabrucky, K. & Ratner, H.H. (1992). Effects of passage type on comprehension monitoring and recall in good and poor readers. *Journal of Reading Behavior, 3*, 373-91..