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KNOWLEDGE AND TIME CONSTRAINT
ON READING COMPREHENSION OF
VIETNAMESE LEARNERS OF ENGLISH AS A
SECOND LANGUAGE

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TITLE

THE IMPACT OF BACKGROUND KNOWLEDGE AND TIME CONSTRAINT ON
READING COMPREHENSION OF VIETNAMESE LEARNERS OF ENGLISH AS A
SECOND LANGUAGE

By

Trang Thi Thuy Nguyen

B.A, Hue College of Foreign Languages, 2007

A Thesis

Submitted in Partial Fulfillment of the Requirements for the

Master of Arts Degree

Department of Linguistics

in the Graduate School

Southern Illinois University Carbondale

August 2012

THESIS APPROVAL

THE IMPACT OF BACKGROUND KNOWLEDGE AND TIME CONSTRAINT ON
READING COMPREHENSION OF VIETNAMESE LEARNERS OF ENGLISH AS A
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A Thesis Submitted in Partial
Fulfillment of the Requirements
For the Degree of
Master of Arts
In the Field of TESOL

Approved by:

Dr. Krassimira Charkova, Chair

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May 8, 2012

AN ABSTRACT OF THE THESIS OF

TRANG NGUYEN, for the Master of Arts degree in Teaching English to Speakers of Other Languages presented on May 8th, 2012, at Southern Illinois University, Carbondale.

TITLE: THE IMPACT OF BACKGROUND KNOWLEDGE AND TIME CONSTRAINT ON READING COMPREHENSION OF VIETNAMESE LEARNERS OF ENGLISH AS A SECOND LANGUAGE.

MAJOR ADVISOR: Dr. Krassimira Charkova

Reading in a second language is an interesting area of research because the factors affecting reading have brought about much controversy in related theory and research. Particularly, schema theory has raised long-term debate about whether background knowledge facilitates or impedes reading comprehension.

In recognition of such issue, the current research was conducted to examine the impact of background knowledge on second language reading comprehension. Additionally, the impact of time constraint on reading comprehension was also investigated. Thirty-one students of intermediate level of English in Le Quy Don high school, Vietnam took part in the study. Four cloze texts, two of familiar topics and two of unfamiliar topics, were administered under the conditions of limited time and unlimited time. The results revealed significantly positive effects of background knowledge and no time constraint on second language reading comprehension. Further, a significant interaction between background knowledge and time constraint was found. These findings have important implications for second language pedagogy in view of standardized and classroom assessment of reading performance. However, the most important finding of this research relates to the significant interaction between background knowledge and time constraint which has not been given due attention in previous research.

DEDICATION

This thesis is dedicated to my parents, who gave birth to me and supported me all the long way to this end. Thank you so much for bringing me up this far. I love you!

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This thesis would not have come to existence without the assistance and support from several individuals.

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TABLE OF CONTENTS

<u>CHAPTER</u>	<u>PAGE</u>
ABSTRACT	i
DEDICATION	ii
ACKNOWLEDGMENTS	iii
LIST OF TABLES	v
LIST OF FIGURES	vi
CHAPTERS	
CHAPTER 1 – Introduction	1
CHAPTER 2 – Review of Literature	8
CHAPTER 3 – Research Methodology	24
CHAPTER 4 – Results	33
CHAPTER 5 – Discussion and Conclusions	42
REFERENCES	51
APPENDICES	
Appendix A	65
Appendix B	66
Appendix C	67
Appendix D	68
Appendix E	69
Appendix F	70
Appendix G	71
Appendix H	72
Appendix I	73
Appendix J	74
VITA	75

LIST OF TABLES

TABLE

PAGE

Table 1	27
Table 2	34
Table 3	35
Table 4	35
Table 5	37
Table 6	38
Table 7	40
Table 8	41

LIST OF FIGURES

<u>FIGURE</u>	<u>PAGE</u>
Figure 1.....	36
Figure 2.....	39

CHAPTER 1

INTRODUCTION

“Comprehending words, sentences, and entire texts involves more than just relying on one’s linguistic knowledge” (Carrell, Devine & Eskey, 1988, p.76)

The influence of background knowledge on the comprehension of a text has been widely studied and has raised much controversy (Aebersold & Field, 2005; Carrell, Devine & Eskey, 1988, Hudson, 2007; Vacca & Vacca, 2008). Among numerous studies which have provided evidence in support of the positive impact of prior knowledge on reading comprehension, either in L1 or L2, a few conclusions appear to go against this trend. However, in most of the studies, time constraint is often overlooked as an additional factor that can affect reading comprehension. This chapter will focus on theoretical issues related to the nature of the reading process.

1.1 What Is Reading And How Is The Reading Process Analyzed?

Reading is such a familiar phenomenon that a layman may take it for granted. Most of us might think that it is a simple process of understanding the meaning of the text. However, the definition of this process is far more complicated than one might think, as Hudson (2007, p.7) notes, “the capacity to read is a truly wondrous human ability.” According to Goodman (1967), reading is both a “receptive language process”, and at the same time, a “psycholinguistic process” that involves grapheme-phoneme decoding, word recognition, syntactic and semantic processing, and drawing upon prior knowledge. During this complicated process, the interaction between language and thought occurs in order to engender comprehension (Carrell et al., 1988). In fact, reading theory has undergone a host of changes throughout the development of general theories of learning. Before the 1960s, reading was defined as a process of decoding phonemes

and was described as being attached to oral language skills (Carrell et al., 1988; Fries, 1945, 1963, 1972; Rivers, 1968). It was not until 1965, however, that reading comprehension received more attention from a number of linguists, psycholinguists and cognitive psychologists as it was recognized to involve mental processing. Accordingly, cultural knowledge, or 'schema', has also been gradually examined and confirmed as an essential factor in drawing comprehension during reading. The term "psycholinguistic guessing game" was coined for the reading process by Goodman (1971, p.135) to refer to the role prior knowledge in making predictions about what they were going to read. In a similar vein, Anderson and Pearson (1984) defined comprehension as an interaction of new information with old knowledge. 'Prior knowledge', 'cultural knowledge', or 'old knowledge' appeared more frequently in the discussions about reading comprehension. More importantly, the processes that readers undergo when reading in the L1 also occur when reading in the L2 (Hudson, 2007).

In this paradigm of research, the first reading models view reading as a 'bottom-up' process which originates from the 'bottom' or the language of the text. In other words, readers are expected to construct meaning via decoding the smallest units of language such as morphemes, words, clauses, and sentences (Carrell et al., 1988; Hudson, 2007; Plaister, 1968; Rayner & Pollatsek, 1989; Rivers 1964, 1968; Yorio, 1971). In this perspective, reading starts with grapheme-phoneme decoding, and proceeds to single words, phrases and then to sentences, in a linear fashion, not recognizing the effect of background knowledge or other factors.

Bottom-up reading models were challenged by opposing views which formed another category of reading models, known as top-down models. As can be inferred from the term 'top-down', reading begins from the top, or from readers' prior knowledge of the text structure and text content to make predictions about the text which are later confirmed or disconfirmed

(Carrell et al., 1988; Goodman, 1976; Smith, 1971, 1994). In this point of view, reading is depicted as more selective and purposeful than described by bottom-up models of reading (Carrell et al., 1988; Hudson, 2007). Many other linguists, such as Fries (1963), Rivers (1968) and Eskey (1973), realize the importance of background knowledge, without which reading comprehension is prone to breakdown. Historically, the influence of the top-down approach has truly advanced in the study of L2 language reading since 1979 (Carrell & Eisterhold, 1983; Carrell et al, 1988; Hudson, 1982; Johnson, 1981, 1982; Steffensen, Joag-dev, & Anderson, 1979). Carrell et al. observe that top-down views of reading gained such a far-reaching effect when they came into being, that they nearly replaced the bottom-up theory.

However, in most recent reading theory, neither of the two approaches, bottom-up or top-down, is considered appropriate to explain the complexity of the reading process. Having recognized the deficiency of both, reading theorists have acknowledged the interactive nature of reading as a continuous interaction of both bottom-up and top-down processes (Carell et al., 1988). In the interactive reading theory, both bottom-up and top-down processes occur simultaneously. Interestingly, according to Grabe (1991) and Hudson (2007), it depends on the focus of the interaction; depending on whether the focus is on product or process, specific reading models seem to be inherently biased towards either bottom-up or top-down processing. The interactive reading models proposed by Rayner and Pollatsek (1989); Ehri (1995); Eskey and Grabe (1988) are examples which emphasize a bottom-up approach, or reading as a process rather than a product.

Models by Anderson and Pearson (1984), Carrell (1983), and Hudson (1982, 1991) are leading examples in asserting the role of background knowledge. This classification is far from closed, however, when Hudson (2007) suggests another group of linguists who take external

factors such as social, contextual, and political impact as the most influential to reading comprehension (cf. the models by Maybin & Moss, 1993; Parry, 1993; Street, 1993). Regardless of which process they prioritize, all of the interactive models mentioned above have contributed to providing a more comprehensive look at the reading process from all perspectives (e.g. from the text, from the learners and from the external factors of the text and the learners).

In sum, all three approaches, including bottom-up, top-down, and interactive, illustrate three different trends in the analysis of the reading process. The chronological development of these trends has brought about a new and more comprehensive definition of reading. That is, reading is not a passive exercise, but rather an active and interactive process (Carrell et al., 1988; Goodman, 1967; Rumelhart, 1977; Smith, 1971) that involves both the readers and the text.

This fact is not only widely recognized in first language (L1) reading, but also in second language (L2) reading. Moreover, in order for the reading process to be active, background knowledge must play an indispensable role. How then is the concept of “background knowledge” illustrated and studied in reading research? This is the central question to be addressed in the next section.

1.2 What Is Schema?

Historically, according to Anderson and Pearson (1984), the term ‘schema’ was first used by Gestalt (1932) with a literal meaning of ‘shape or form’. However, Anderson and Pearson (1984) maintained that Bartlett (1932) was the first psychologist who used the term to which it is widely referred today. In that sense, schema (‘schemata’ as plural) or background knowledge in this research is defined as the knowledge stored in the human mind prior to reading a text (Bartlett, 1932). Hudson (2007) calls it a collection of default concepts, values and judgments about events and settings. As such, it can be compared to an elaborate collection of different

folders, each of which contains information on a specific topic or issue. Such folders of knowledge play a vital role in guiding a reader to comprehend a text when reading (Anderson & Pearson, 1984; Carrell et al., 1988; Hudson, 2007). Specifically, during the process of interacting with a text, the reader's mind looks for folders which contain some corresponding information with the text and help to build comprehension (Hudson, 2007).

Schemata are hierarchically organized from the most universal at the top to the most specific at the bottom (Carrell & Eisterhold, 1983; Fisher & Frey, 2009). Also, Carrell and Eisterhold (1983) classify schemata into two opposite levels, namely bottom-up and top-down. The bottom-up process is referred to as 'data-driven' while the top-down processing is described as 'conceptually driven'. More notably, these two processing models occur at all levels at the same time (Rumelhart, 1980) and supplement each other in order to bring about comprehension in readers (Carrell & Eisterhold, 1983). Corresponding to each level, two types of schemata have been classified: formal and content. The former refers to background knowledge of the formal, rhetorical organizational structures of different types of texts whereas the latter refers to background knowledge of the content area of a text (Carrell & Eisterhold, 1983; Fisher & Frey, 2009). Specifically, content schemata involve general knowledge, such as knowledge of culture, society, history, life contexts and situation. Formal schemata, on the other hand, involve knowledge of language, such as phonemes, syntax, semantics, etc.

Schema theory has appeared as a description of the role of background knowledge (Anderson & Pearson, 1984; Bartlett, 1932; Carrell et al., 1988; Rumelhart, 1980; Rumelhart & Ortony, 1977). According to schema theory, the reading process is an interaction between a reader's schemata and the text. Therefore, schemata can support reading comprehension if readers know how to refer to the appropriate folder of the text's topic in their mind. Specifically,

readers know when and where to apply which type of schemata into their reading in order to achieve effective and efficient comprehension (Fisher & Frey, 2009). Likewise, when an inappropriate reference occurs, a mental “short circuit” will come about, hindering the reading process. A few studies have been conducted to provide evidence of the reliance on schemata resulting in comprehension breakdown (Hudson, 2007).

Strictly speaking, schemata are abstract bodies of pre-owned knowledge that are organized into two levels, i.e. bottom and top. These bodies of language are widely recognized to have an essential role in the reading process. However, whether the role is positive or negative is still controversial. As Fisher and Frey (2009) and Hudson (2007) have suggested, the expected result for the reading process, namely a reader’s comprehension of the text and the opening of a new topical folder, depends on the way a reader applies his or her schemata. Given the scope of this study, schemata will be used to refer specifically to content schemata and within the L2 classroom.

Upon addressing the two broad concepts of ‘reading’ and ‘schema’, the present research is conducted with the primary purpose of exploring the role of schemata on L2 reading among ESL Vietnamese learners. That is, it aims to examine whether learners’ knowledge of a topic can facilitate their reading comprehension. The study also aims to investigate whether time constraint significantly affects L2 reading comprehension.

Despite the fact that before this study, there have been numerous studies undertaken to investigate the impact of schemata on reading comprehension, especially in L2 reading, it is still arguable whether there is really any impact. Or, if any, whether the impacts are negative or positive has been an issue of controversial empirical evidence. In addition, the impact of time constraint has rarely been investigated in previous studies. In reality, time constraint is applied to

assess reading in class or on standard exams such as, TOEFL, IELTS, or GRE. Accordingly, the use of time constraint as a reliable and valid variable in measuring reading comprehension is still debatable. Also, the interaction between the impact of schemata and of time constraint on L2 reading comprehension is worth investigating to the extent that it provides more comprehensive evidence covering both internal and external factors affecting reading comprehension. This study was carried out in order to contribute to the body of research concerning reading theories. In other words, this study aims to provide further empirical evidence about the role of background knowledge, of time constraint, and of the interaction of background knowledge and time constraint on second language reading comprehension with a group of Vietnamese learners of English in the school system of Vietnam.

So far, this chapter presented the theoretical framework of the study. Following this introduction, chapter 2 reviews previous literature and research that motivates and engenders the questions addressed in this thesis.

CHAPTER 2

REVIEW OF LITERATURE

The purpose of this chapter is to review previous studies which look into the issues concerning the impact of background knowledge (schemata) and time constraint on reading comprehension, especially in L2 reading. Additionally, the use of the cloze procedure as a valid measurement of reading comprehension is discussed. As such, the review is organized into three sections: 1) Schemata and the impact of schemata on reading comprehension, 2) Time constraint and the impact of time constraint on reading comprehension, and 3) The cloze procedure as a valid measurement of reading comprehension.

2.1 The Role of Schemata in Reading Comprehension

The role of background knowledge on reading comprehension has been the subject of much recent enquiry in L1 reading and a number of studies in L2 reading. So this section of the review of literature will cover both studies which examined the role of schema in L1 reading and also studies in L2 reading.

Overall, in both L1 and L2 reading, it is widely held that the individual learner's schema has a profound impact on the entire reading process. Much of schema theory reflects the facilitating role of prior knowledge on reading comprehension. Freire and Macedo (1987) offer a succinct summary:

Reading does not consist of merely of decoding the written word of language; rather it is preceded by and intertwined with knowledge of the world. Language and reality are dynamically interconnected. The understanding attained

by critical reading of a text implies perceiving the relationship between text and content. (p.29)

According to Freire and Macedo (1987), during the reading process, the interaction of text content and reader's background knowledge permits and engenders comprehension. Spiro, Bruce, and Brewer (1980) also share the opinion that to build comprehension of a text, a reader brings his/her knowledge of the world and of the language to interpret the meaning. Read and Rosson (1982), Reutzel and Hollingsworth (1991), and Reynolds, Taylor, Steffensen, Shirey, and Anderson (1982) add that a reader's comprehension is only possible due to the interaction of their prior knowledge of the world and of the language to the content of the text. Consequently, the less familiar readers are with the concepts or content of the text, the more they would have to try to build understanding (Barnitz, 1985). According to Liu, Schedl, Malloy, and Kong (2009), one of the foundational first language (L1) studies purported to have initiated schemata theory was conducted by Barlett (1932). Barlett (1932) found evidences that supported the impact of topic familiarity or cultural schemata on subjects' recall of information in the text.

Another L1 study, conducted by Reynolds et al. (1982), added further evidence about the impact of content schemata on reading comprehension. The subjects in this study were African-American and white, eighth-grade students. The text was a letter allegedly written by a boy about an incident at school. The text might be interpreted as a fight in the cafeteria or as an example of sounding, which is "ritual insult" found in African-American society. The results revealed a significant difference in the interpretation of the text by the two groups. The white group comprehended the text as a description of a fight, while the African-American group interpreted it as a description of a sounding. In other words, students' background knowledge was found to affect their text interpretation.

Other L1 research was undertaken by Anderson and Pichert (1977), Anderson, Pichert, and Shirey (1983), Alderson and Urquhart (1984), Brown (1982), Erickson and Molloy (1983), Goetz, Keynolds, Schallert, and Radin (1982). Additionally, several other studies also contributed to the development of schema theory by finding evidence to support the effects of formal schemata on L1 reading comprehension (e.g. Barnett, 1986; Grabe & Kaplan, 1996; Halliday & Hasan, 1976; and Vandijk, 1977).

The findings of studies related to the role of schema in L1 reading have also received wide recognition in second language (L2) reading research. It has become an explicable trend since according to Hudson (2007), if prior knowledge can affect the recall and comprehension of readers within a particular culture (i.e. in L1 reading), it is expected that there would be cross-cultural and cross-linguistic effects (i.e. effects in L2 reading). In Hudson's words, since culture is embedded in language, reading in L2 can be compared to reading in a cross-cultural and cross-linguistic environment. Recent research on L2 reading comprehension has provided evidence supporting the impact of both content schemata, which is related to content area and cultural knowledge, and formal schemata, which is related to the language, conventions, and rhetorical structures of the text on L2 reading comprehension (Alderson & Urquhart, 1985; Carrell, 1984b; Carrell, 1987; Hudson, 2007).

Steffensen, Joag-Dev and Anderson (1979) and Pritchard (1990) carried out research to support the position that content schemata affects L2 reading comprehension. Specifically, subjects in their research were from different cultural background and were provided texts of familiar and unfamiliar topics. The findings showed that subjects recalled the familiar topic texts better than the unfamiliar topic ones. At the same time, the subjects tended to distort their recall

on the unfamiliar topic texts based on their own knowledge of culture rather than based on the text.

Additionally, Johnson (1982) investigated the effect of the cultural origin of prose on the reading comprehension of Iranian intermediate and advanced students of English as a second language (ESL) at the university level. The results revealed that the cultural information embedded in the stories affected reading comprehension more than the syntactic or semantic complexity of the text. Along the same line, Floyd and Carrell (1987) carried out a study with 34 ESL students at an intermediate level of proficiency. Two training sessions on cultural knowledge were provided to the students in the treatment group. The instrument to measure students' reading comprehension was a pre- and post-cultural related reading test. The researchers found significant superiority in the performance of the subjects in the treatment group as compared to the control group on passages containing relevant cultural information.

Likewise, Liu (2011) conducted a study that looked into the effects of major field of study and cultural familiarity, which is content schemata on TOEFL® iBT reading performance. With a large sample of 8692 subjects, the study used six reading passages. Three passages covered the topic of physical science, while three others covered the subjects of art and history. These passages were investigated for differential item, bundle and passage functioning. The results revealed the impact of content schemata on reading performance of all the test-takers at individual item and bundle levels. Several other studies have demonstrated evidence corroborating the position that prior cultural or content knowledge could help participants better their comprehension or recall of a text (e.g., Ammon, 1987; Brantmeier, 2005; Carrell, 1983; Hammadou, 1990, 2000; Johnson, 1982; Langer, Bartolome, Vasquez, & Lucas, 1990).

Concerning formal schemata, the number of studies that support the impact of this type of schemata is investigated as well. Carrell (1984a) pioneered this position with research that examined the impact of story structure on ESL subjects' reading recall. She found significant superiority in the recall of the conventionally ordered stories as opposed to the recall of the unconventionally ordered ones. Furthermore, Carrell (1984b) also investigated the influences of English expository text on non-native readers. The results showed significant differences between the recall of tightly organized structures than for collection of descriptions passages. This research was later repeated by Tian (1990) in a different location, Singapore, and provided similar results.

The impact of both content and formal schemata has also been investigated. Johnson (1981) found that reading comprehension is influenced more by cultural information than of by the syntactic structure of a text. Soon after that, Carrell (1987) examined the simultaneous effects of both content schemata and formal schemata on reading comprehension, as well as any potential interaction between these two variables. In her research, high intermediate ESL learners were divided into two groups based on their religion, one Muslim, the other Catholic. Both of the groups were provided with two texts, one with culturally familiar content, and the other with culturally unfamiliar content to read, recall and answer questions. Within each group, one half of the participants read a familiar, rhetorically well-organized text. The other half read an unfamiliar, rhetorically altered text. Data analyses were performed using the general linear models procedure, which is comparable with analysis of variance. The result of this study showed significant impact of both content and formal schemata on reading comprehension. In details, form and content familiarity produced better reading comprehension while form and content unfamiliarity impeded reading comprehension. Interestingly, content was found to be a

more important factor than form. That is, when either form or content was unfamiliar, the unfamiliar content posed more difficulties for the readers than the unfamiliar form.

This research by Carrell (1987) has set a foundation for many follow-up studies which were set up to examine the role of both content and formal schemata in reading comprehension, particularly of content schemata in facilitating L2 reading comprehension. One such study, conducted by Keshavarz and Atai (2007), investigated two questions: 1) Do content schemata have any significant effect on the relationship among EFL proficiency, reading comprehension and recall? 2) Are there any significant interactions among the effects of content schemata, EFL proficiency, and lexical or syntactic simplification on EFL reading comprehension? Two hundred and forty male Iranian EFL students were selected and assigned to four groups according to their proficiency in English. They were asked to do eight tests on two reading texts, one of which was Islam-related, the other of which did not pertain to Islam. The Nelson English Test was applied for scoring reading comprehension and recall protocols were used for reading recall. A one-way ANOVA was performed. The results indicated that content schemata had a more significant role than the other factors on reading comprehension and recall.

Overall, the theoretical and empirical research above has elucidated and substantiated the position that both content and formal schemata could facilitate both L1 and L2 reading comprehension in general and more specifically, EFL reading comprehension. Particularly in comparison with formal schemata, content schemata were revealed to play a more crucial role. However, it is important to take into account the conflicting results of studies investigating the role of schemata in facilitating reading comprehension which have raised much controversy. In those studies, reader schemata showed either no significance in facilitating reading

comprehension or showed a negative impact on reading comprehension when the schemata were incompatible with the information, namely cultural knowledge, embedded in the text.

Firstly, a study by Lipson (1983), investigated some problems that might arise in young readers' comprehension when reading a text whose content is divergent from their "socio-cultural knowledge". The subjects were 4th and 6th grade students from different religious backgrounds. They had to read and recall expository passages with familiar and unfamiliar content about religions. The amount of implicit and explicit distortion recall of the unfamiliar topic text revealed the negative impact of prior knowledge on their reading comprehension. In this case, subjects' over-dependence on their prior knowledge about the familiar religions had led to incorrect inferences about the text about the unfamiliar religions.

Similarly, Alverman, Smith, and Readance (1985) also investigated the effects of schemata that were contrary to information presented in a reading passage. The results were consistent with the findings above in the sense that participants recalled the information that was not relevant to the text that they read. Instead, the information they provided was found to be compatible with their prior knowledge. Likewise, in multiple-choice tests, subjects selected options that matched their background knowledge rather than the information embedded in the text. Additionally, the scores on 'compatible' passage were found to be higher than those on 'incompatible' passage.

More recently, another study was conducted by Hammadou (1991) to examine the effects of prior knowledge on the recall of text by foreign language learners studying French and Italian in an American university. Three newspaper articles were provided for students to read and recall after having read each passage. When students had finished the recall of the three texts,

they were given a list of the topics that they had just read about and asked to rank order these according to their familiarity with the topic. The recall protocols were scored according to the percentage of possible propositions contained in each. Unexpectedly, no significant differences between comprehension of familiar and unfamiliar topics as well as between familiar and unfamiliar recall for more proficiency and less proficiency readers were shown in the results. In other words, in Hammadou's (1991) research, content schemata were found to have no impact on L2 reading comprehension. The limitations which are found in this study were taken into consideration. It was noted that the study included mostly subjects with very little variation in levels of ability. Moreover, the activity of rank ordering may not be a reliable task for eliciting information about the degree of background knowledge of readers.

Thus far, the review of related reading research has revealed two opposing trends for the role of background knowledge in reading comprehension. On the one hand, a number of studies have found it to be a significant factor. On the other hand, there is also evidence that it has no effect or even negative effect (Alvermann et al., 1985). The reasons for the controversial results may be due to the diversity of measures used to collect data and the various ways of operating background knowledge. As such, the present study was designed in view of this controversial area of research with the purpose of finding evidence concerning the role of background knowledge in L2 reading comprehension.

2.2 Time Constraint and Reading Comprehension

In addition to the effect of background knowledge, this study took into consideration the role of time constraint on reading comprehension. If schema is an internal factor which is inside the readers and the text, then time constraint can be considered an external factor. Similar to

schema-focused research, a bigger number of studies on the effect of time have been done in the context of L1 reading than in the context of L2 reading. That is why this section of the literature review incorporates both L1 and L2 research.

Generally, time constraint has only been used as a tool of test management rather than a construct related to reading comprehension (Elliot, Braden, & White, 2011). As such, in contrast to the abundant research on the impact of schemata on reading comprehension, there is little empirical research on the effect of time limitation. As noted by Chang (2010), “timed reading involve[s] having students read under time pressure, the purpose of which is to improve reading speed to an optimal rate that supports comprehension...” (p.287). Chang (2010) also agrees with Carver (1982, 1992) when maintaining that timed reading entails measuring the reading rate or reading speed; the higher the reading speed, the more improved the reading comprehension.

Perfetti (1985) has even argued that speed and comprehension are the two main factors that construct the definition of reading ability. The nature of the interaction is still controversial among researchers, however, since the impact of time constraint was found to be different or even conflicting among studies. According to Chang (2010), a few empirical studies in L1 contexts have revealed the supportive role of mild time pressure on reading speed and comprehension. In support to Chang (2010), Breznitz (1987), and Breznitz and Share (1992) found that students committed fewer reading errors and achieved higher comprehension scores when reading at the maximal normal rates than when they were in a self-paced condition. However, at the slowest reading rates, students improved in decoding but significantly decreased in reading comprehension ability. Empirical research conducted by Walczyk, Kelly, Meche, and Braud (1999) revealed similar results. Two research questions proposed in the study asked, “Are readers most mindfully engaged when they read under no time pressure, mild time pressure or

severe time pressure?” and “Is reading skill automaticity (verbal efficiency) more strongly correlated with reading comprehension when reading occurs under more time pressure?” In this study, 89 freshmen completed both a semantic access task and a reading comprehension task and prior to completing a stress-arousal checklist. Comprehension was assessed via the Sentence Verification Technology (SVT) procedure with a maximum score of 96 and minimum 0. A one-way ANOVA with three levels (No Pressure, Mild Pressure and Severe Pressure) was performed on reading comprehension scores together with Pearson correlations between each of the measures. The results of the study showed that mild time pressure produced the best comprehension score, followed by severe time pressure, whereas no time pressure produced the lowest reading comprehension score.

Although following a similar vein of research, Meyer, Talbot, and Florencio (1999), obtained contrary results with college students. Meyer et al. attempted to investigate the effects of time constraint on reading comprehension under three reading conditions (no time pressure (90 words per minute); mild time pressure (130 words per minute); and severe time pressure (300 words per minute)). The results indicated that students improved their reading performance and comprehension when more time was allotted. Lesaux, Pearson, and Siegel (2006) came to a similar conclusion in a study that examined the effects of extending time limits on reading comprehension for 64 adults with developmental disabilities. Similarly, their results supported the finding that students achieved higher reading scores when given extra time while testing.

Another part of time-constraint research has found no effect of time constraint on reading comprehension. Falke (2008) carried out an inquiry into the effects of text type and time limits on students' reading performance through four assessment tools of reading comprehension, namely recall, cloze procedure, multiple choice, and sentence verification. In this, only three

children were selected as subjects and placed in three different settings. The subjects participated in four types of tests with 40 expository and 40 narrative stories, each both with and without imposed time constraint. The results from the descriptive statistics for each subject revealed that there was no noticeable difference in the rate of correct and incorrect responses in any of the reading comprehension tests when these children were put under time pressure or non-time pressure condition (Falke, 2008). The justifications for the results included the difference in instruction with the previous research and the amount of information that the subjects received in the time limit and non-time limit conditions.

In addition to the limited literature available treating the effects of time constraint on reading comprehension in an L1 context, there has been little inquiry into such time effects in an L2 context. Chang's (2010) research is one of the most widely known to be discussed. Stemming from the review of literature which showed the impacts of timed reading on reading rates and comprehension, Chang (2010) integrated a 13-week timed reading activity into a normal curriculum in order to improve students' reading rates and comprehension. Eighty-four EFL college students were selected as subjects and divided into two groups (e.g. an experimental and a control group). Instruments were pretests and posttests on reading speed and comprehension. A final report was taken toward the end of the course activity as a measurement for students' perception. The results show general student improvement in reading speed and comprehension after doing the timed reading activity. In other words, the results of the research provided evidence about the purporting impact of time constraint on not only reading comprehension but also on reading speed. These results were in tune with what Cushing-Weigle and Jensen (1996) found on 64 ESL students. In Cushing-Weigle and Jensen's (1996) explanation, timed reading

not only placed some pressure on students to hasten their reading speed, but it also evoked their concentration on the reading task, thereby improving their composite performance.

In sum, the review of literature above provides an overview of the research on the impacts of time constraint on reading comprehension in particular and reading performance in general in both L1 and L2 settings. In an L1 setting, there seem to be contrasting findings about the influence of time constraint. One trend supports the facilitating role of mild time constraint, another supports the role of extended time, whereas another does not find any impact of time constraint on reading comprehension under any types of assessment.

In an L2 setting, on the other hand, the empirical research mentioned is able to find evidence support the stimulating role of time constraint in improving reading comprehension. Such a small number of studies is, nevertheless, not sufficient to come to any clear conclusion about the true nature of the effects of time constraint on reading comprehension. Additionally, the improvements that subjects made thanks to the timed reading were just marginal and not consistent; therefore the impacts of time constraint remain unclear. The fact is that standardized tests such as TOEFL, IELTS, etc. are applying strict time constraint on test takers without good evidence about what time constraint elicits optimal test-taker performance. Thus, one may propose the following question: Do English teaching programs need to apply timed reading to improve their students' reading comprehension and reading performance, especially in the standardized tests mentioned? The present research aimed to provide further evidence about the role of time constraint on reading comprehension.

2.3 Cloze Procedure as a Valid Measurement of Reading Comprehension

The term “cloze procedure” is attributed to Taylor’s (1953) foundational research in testing methodologies. Though the cloze procedure itself may seem outdated, Helfeldt, Henk, and Fotos (1986) state that conventional cloze tests have been used as a measure of reading comprehension for 25 years. Cloze procedure remains of much interest to linguists and will not be abandoned as an effective tool in assessment (Bormuth, 1967; Brown, 2002; Gamaroff, 1998; and McKamey, 2006). Before reviewing some pertinent literature on the cloze procedure, it is necessary to review some important terminology that will be used in this discussion.

As defined by Bormuth (1962), a “cloze item” is a blank which replaces a deleted word. Apart from apostrophes occurring within a word, no punctuation is replaced by the cloze item (p.2). The length of cloze items can be uniform throughout the passage (Bormuth, 1962; Caroll, Carton, & Wilds, 1959; Jonathan, 1970) or varied, depending on the length of the deleted words (Jonathan, 1970). Further, the methods of deletion typically vary between fixed method deletion and selective deletion of words. The former, which is more popular, is the traditional method in which every certain number of words (typically, 5, 7, or 9) is removed, depending on the proficiency level of test takers (Brown, 2002). In the latter method, conversely, specific words, which hold the value of assessing particular constructs (vocabulary, grammar, etc.) are deleted. The cloze tests results are interpreted as equivalent to reading comprehension levels as follows: cloze scores ranging from 0-34% correspondent to “frustration” level readers; 35-49% correspondent to “instructional level” readers and 50% and above are equated with “independent” level readers (Bormuth, 1971).

A “cloze response” refers to what the subject writes or fails to write in response to a cloze item (Bormuth, 1962, p.3). The responses can be counted as correct according to either acceptable or exact words to the original text (Sadeghi, 2008). A cloze test is a collection of

cloze items within a passage; a set of 50 items is generally considered adequate for a cloze test (Bormuth, 1962; Taylor, 1953). Cloze procedure refers to a set of rules by which cloze tests are made. Rules specify the “definition of a word, the manner in which words are selected for deletion, the number of items in the test, the length of the blank, and the spacing of the type” (Bormuth, 1962, p.3). Taylor (1953) went so far as to describe it as a psychological tool for measuring the effectiveness of communication (Jonathan, 1970).

Empirical research on the validity of measurement via cloze test was strongly corroborated with results which greatly supported the validity of the procedure. Taylor (1957) was working on the reliability of the cloze procedure in the measurement of reading comprehension and found that there was an 85% overlap between the cloze test and the comprehension test. In other words, the results revealed the reliability of cloze procedure in testing reading comprehension (as cited in Rye, 1982).

Additionally, Bormuth (1962) investigated whether cloze tests could be valid measures of readability and reading comprehension. The 150 subjects consisted of children in grades 4, 5, and 6 from an elementary school in Martinsville, Indiana. Participants read nine short passages and then performed one cloze test (deletion of every fifth word with 50 items per test) and one comprehension test (four multiple-choice with 30 items per test). The results showed high reliability, validity, and efficacy of cloze tests as measurements of reading comprehension ability. A number of other studies have come to similar conclusions (e.g. Bachman, 1982, 1985; Davies, 1979; Fries, 1963; Greene, 2001; Oller & Jonz, 1994).

In further support of the validity of the cloze procedure, Fries (1963) mentioned three layers of language meanings which were involved in the cloze procedure and thus helped the cloze test to measure reading comprehension more successfully. The term layer here refers to the

layer of meanings carried by the grammatical structure, by the lexical items and by socio-cultural elements. Greene (2001) added further confirmation for the reliability of the cloze procedure by comparing the means, dispersion, and frequency distributions of different cloze tests which produced similar results. Further, Porter (1976) emphasized that cloze tests can measure language comprehension at all levels, including the micro- and macro-level.

As Carol, Carton, and Wilds (1959) noted, a good mastery of a foreign language is not enough for a reader to successfully work on a cloze test, but it also needs other intellectual qualities such as reasoning ability and ideational fluency. Sasaki (2000) supported this position with her research on the effects of cultural schemata on students' cloze test-taking process. The subjects were 60 Japanese EFL students who were divided into two groups with equivalent English reading proficiency. They completed either a culturally familiar or an unfamiliar version of a cloze test. After completing the test, participants were asked to recall the passage and give verbal reports on their test taking process. The results revealed that students reading a culturally familiar topic solved more cloze items and demonstrated generally more accurate recall than those reading a culturally unfamiliar topic. In this research, other than language, cultural schemata were also identified as an important factor affecting performance in cloze procedure.

In short, the review of literature above describes the rationale for incorporating a popular measurement of reading comprehension, namely the cloze procedure. To this end, this tool of measurement is used in this study with the goal of uncovering evidence of the impact of both schemata and time constraint on L2 reading comprehension.

2.4 Chapter Summary

In summary, this chapter has reviewed the literature related to the impact of background knowledge (or schemata) and time constraint on reading comprehension. Interestingly, in each field there exist different trends of findings. Regarding background knowledge, several studies have found a significantly positive impact of background knowledge on reading comprehension (e.g. Carell, 1987; Floyd & Carrell, 1987; Johnson, 1982; Keshavarz & Atai, 2007; Liu, 2011; Pritchard, 1990; Steffensen, Joag-Dev & Anderson, 1979). Other studies have found no impact (e.g. Hammadou, 1990), whereas some studies have reported negative impact of background knowledge on reading comprehension (e.g. Alverman, Smith, & Readance, 1985; Lipson, 1983). In a similar fashion, though time constraint has not received as much attention in research as background knowledge, opposing results have been reported. Specifically, some research has found a significant impact of time constraint on reading comprehension (e.g. Breznitz, 1987; Breznitz & Share, 1992; Chang, 2000; Cushing-Weigle & Jensen, 1996; Walzyck, Kelly, Meche, & Braud, 1999), whereas other research has found no significant impact of time constraint (Lesaux, Pearson, & Siegel, 2006; Meyer, Talbot, & Florencio, 1999). Stemming from the findings of these previous studies, and in view of the complexity of their results, this study was conducted with the purpose to find further evidence supporting either of the existing trends about the impact of background knowledge and time constraint on reading comprehension. The next chapter presents a detailed account of the methodology of the study.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter introduces the research problems which served as the motivation for both the research questions and the methodological approach underlying this study. In addition, a justification for the selection of participants and the research instruments is provided, as well as an illustration of the details of data collection. This is followed by description and discussion of the processes as well as the methods used in the data analysis. Finally, the ethical issues surrounding the research process are clarified. This chapter then concludes with a brief summary of the preceding sections.

3.1 Research Problems

The present study was conducted to investigate the impact of schemata on reading comprehension among ESL students in Vietnam. Specifically, this study tested the hypothesis that topic familiarity produces better comprehension than topic unfamiliarity. The effect of time constraint on ESL reading comprehension was also examined. Since there were two independent variables, the interaction between these variables was also of interest to this study. In particular, the study examined second language reading comprehension in 2x2 conditions: topic familiarity and time constraint; topic unfamiliarity and time constraint; topic familiarity and no time constraint; and topic unfamiliarity and no time constraint. To this end, the study employed quantitative methods of data collection and analysis.

3.2 Research Questions

To address the problems stated above, three questions were proposed to guide the research process:

1. Does content schema (topic familiarity) affect ESL reading comprehension?
2. Does time constraint affect ESL reading comprehension?
3. Is there a significant interaction between time constraint and content schema in affecting ESL reading comprehension? If so, what are the dynamics of these interactions?

3.3 Variables

3.3.1 Independent Variables

This study examined the impact of two independent variables. One independent variable constituted background knowledge with two levels: familiar topic and unfamiliar topic. The other consisted of time constraint at two levels: with time constraint and with no time constraint. Given the categorical nature of these variables, they were assigned nominal values.

3.3.2 Dependent Variables

The dependent variable was calculated as the participants' mean scores on the four cloze reading tasks. The maximum possible score was 42 and the minimum was 0 on each of the four cloze tests.

3.4 Participants

Thirty-one 11th grade students (7 male, 24 female) enrolled in intensive English as a second language (ESL) courses at Le Quy Don High School, in Quang Tri Province, Vietnam took part in this study. Le Quy Don is a special school for the gifted. Students attending this academy are selected on the basis of a very competitive entrance exam, which tests English

proficiency. The participants in the study were at the intermediate level of proficiency as determined by their English placement scores and grade level. They were all 17 years old, and were uniformly from Vietnamese ethnic background, with Vietnamese as their native language. On average, they had studied English as a foreign language in Vietnam for 6 years. The subjects studied English at the advanced level in the general English program at school, three periods per week (45 minutes per period). In the afternoon, they took intensive English classes (twice a week), in which they had the opportunity to enhance their knowledge of the English language in terms of vocabulary, grammar and other skills.

According to Carrell (1987), schemata are not always readily available for activation in readers. She maintains that a reader must reach a certain level of proficiency in order to take advantage of schemata during the reading process. For this reason, students whose language proficiency has reached the intermediate level were chosen. In addition to similarity in proficiency, subjects shared the same culture, native language, educational background and age. The selection of subjects was performed carefully so as to minimize differences among variables and reduce the possibility of unsystematic variations during testing, and hence promote a higher validity of research findings.

3.5 Instruments

Four reading texts in English of the same level of readability and difficulty were used as instruments. The texts themselves were adapted from several articles (e.g. Admin, 2011; Cole, 1990; Frommers, 2008; Jacobson, 2010; Marriott, 1992; Shenon, 1993). The content of each text was chosen carefully so that each text contained content compatible with the counterpart text of the same topic. The researcher then asked a native speaker to edit and revise all the reading texts

such that they would carry identical levels of readability and difficulty, in addition to grammatical accuracy and native wording. Readability and difficulty were measured through the spelling- and grammar-check functions provided in Word 2007. Length and number of difficult words were also controlled in such a way that they were similar throughout all four texts (See Table 1).

Table 1

Readability statistics of the four reading texts

	Familiar topics		Unfamiliar topics	
	Tet Holiday	Ao Dai	Sagaalgaan	Kente
Number of words	415	409	428	410
Number of sentences	18	18	20	18
Passive (%)	33	33	25	27
Flesh Reading Ease	47.0	47.3	43.4	45.6
Flesh-Kincaid grading level	12.1	12.1	11.9	12.2
Number of difficult or unfamiliar words	7	6	7	7
Function words removed	16	14	17	16
Content words removed	26	28	25	26

Among the four texts, two described traditional costumes; one presented a familiar concept, the Vietnamese costume Ao Dai (see Appendix 1), whereas the other described an unfamiliar concept, the Kente (see Appendix 2), a traditional costume of Western Africa. The remaining two texts were selected in light of the same criteria (i.e. they both described a similar topic, but in familiar and unfamiliar cultural contexts). Thus, the text with familiar cultural context described the celebration of Tet (see Appendix 3), the Vietnamese New Year, whereas the unfamiliar cultural context described Sagaalgaan (see Appendix 4), a New Year holiday held in Eastern Siberia. The familiarity of the selected texts was determined through an interview with

the teacher who was teaching intensive English to the participants in the study. Further, she was also their former teacher and knew much of the subjects' academic and personal background.

To measure the students' reading comprehension of these four texts, the cloze test procedure was applied. Cloze tests have been shown to be a reliable and valid tool for measuring L2 reading comprehension by numerous researchers (e.g. Bachman, 1985, 1982; Bormuth, 1967, 1969; McKamey, 2006; Oller & Jonz, 1994; Weaver & Kingston, 1963). Specifically, every ninth word in each text was removed, leaving a blank for students to complete. All of the blanks were of uniform length. Each test consisted of 42 cloze items, of which content words accounted for approximately 60%, function words approximately 40%. By definition, content words subsume the main categories of semantics, such as nouns, verbs, adjectives, and adverbs (Dworzynski, Howell, Au-yeung, & Rommel, 2004; Hartmann and Stork, 1972; Quirk, Greenbaum, Leech, & Svartvik, 1985). The other syntactically important categories, such as pronouns, conjunctions, auxiliary verbs, prepositions, and articles are grouped together as function words (Brown, 1985; Dworzynski et al., 2004; Takashima, Ohta, Matsushima, & Toru, 2001) (see Table 1).

Concerning the operationalization of the limited time condition, three teachers of English, enrolled in the PhD program at SIU, Carbondale were invited to take a pilot test. It took them around 10-12 minutes to finish doing one text. Considering the difference in the proficiency level between the actual students, who were at high intermediate level, and the teachers in the pilot test, it was determined that the time limit should be set at 20 minutes for the actual study. Additionally, under the counseling of the English teacher of these students at school, 20 minutes was deemed an appropriate amount of time for students to complete each test. For the condition without specific time constraint, students were given a period of 45 minutes to finish each task.

3.6 Data Collection

Data collection took place in the participants' classroom during class time on two different days. Since the researcher was not in Vietnam at the time of the study, the tests were administered by a colleague of the researcher who was not their teacher at the time of the study. This was necessary to comply with the Human Subjects requirement for conflict of interest. Additionally, this colleague was informed in detail about the purposes of the study and the requirements of the research procedure.

On the first administration, students were provided with one text on a culturally-familiar topic (Tet), followed by another describing a culturally-unfamiliar topic (Sagaalga). Students were allowed to finish each text within exactly 20 minutes. An interval of 5 minutes was allowed between the two tasks. On the second administration, the other two texts of familiar and unfamiliar topics were provided (the Ao Dai and Kente, respectively). This time, students were allowed to work on each cloze test for a maximum time of 45 minutes of a whole class. Within this time limit, even if students finished the test early, they were still required to sit still until the end of the period. This was done to avoid any distraction to other students.

3.7 Scoring

In scoring participants' cloze test performance, an alternative scoring procedure was used, as adapted from Bachman (1982). That is, a correct answer was considered the one where the exact word was provided or an appropriate synonym for the context of the reading passage. For example, in the text titled Tet, "old" could be replaced by "past" or "last" and "stays" could be replaced by "remains". Each correct answer was awarded 1 point, whereas incorrect answers received 0 points. Since students had to provide their answers in writing, spelling mistakes and

handwriting were taken into consideration during the scoring process. Specifically, if the spelling mistakes or handwriting did not affect the intelligibility or legibility of the words, a full point was assigned. However, if the spelling mistakes or handwriting rendered the responses illegible, those answers were considered incorrect. To increase the rater reliability of the scoring, all the tests were scored twice: initially by the researcher, then by a native speaker. The inter-rater reliability was established based on the agreement of both the first and the second rater. That is, the first rater marked the words that she thought could be counted as correct in the context of the reading texts. Then, the second rater scored the texts, and marked again the words that he thought available to count as correct. If there were disagreements between the raters, these were resolved by consultation with dictionaries and other reference materials.

3.8 Data Analysis

The three research questions involved two independent variables (schemata and time constraint) and one dependent variable (students' reading comprehension scores) on the four reading passages. The interaction effect between the two independent variables was also examined in light of participants' reading comprehension performance. Data analyses were done using SPSS software, version 18.0. In order to see if the observed differences in means between the levels of the independent variables were statistically different, a two-way Analysis of Variance (ANOVA) was performed at $\alpha = .05$. A two-way ANOVA was deemed appropriate due to the fact that two independent variables were investigated (namely topic familiarity and time constraint). This was followed by two dependent t-tests, purpose of which was to test simple effects. All statistical tests were performed at $\alpha = .05$.

3.9 Research Ethics

In accordance with the ethical guidelines issued by the Human Subjects Office, participation was strictly voluntary and confidentiality was respected throughout the research process. Since the subjects belonged to minor group (under 18 years old), the researcher and her colleague in Vietnam were required to finish an online National Institute of Health (NIH) training course with a certificate. The colleague, in addition, was clearly informed about the details of the purposes of the study and procedure of collecting data. Before asking the students to sign in the assent form, permission from the principal of the school as well as from the participants' parents for the subjects to participate in the study was acquired. One day before the study started, the teacher met with all the students to ask them to sign in the assent form as they volunteered. Further, the teacher explained the aim of the research and the nature of the study to all the students. Participants and their parents were assured that participation or non-participation would not affect their grade or relationship with the school in any way. At the same time, no form of reward was given to anyone participating in the study.

Signed consent and assent were obtained from all participants' parents and participants prior to the commencement of the study. Students' names were needed to match performance on each task with a number. Following that, names were removed to ensure the confidentiality of identities. Moreover, all participants and their parents were also assured that the information the participants provided would be used to fulfill the aims of research only, and were informed of their right to ask their children to withdraw or to withdraw from the study at any time, without giving a reason.

3.10 Chapter Summary

This chapter has outlined the research design and described the research procedure in detail. A quantitative method was applied in order to find answers to the questions concerning second language reading comprehension. The data were collected from scores on four cloze reading texts, in four test conditions with different time constraint and different level of text familiarity. Data analyses were done using SPSS software, version 18.0. Finally, an effort was made to abide by all ethical standards during the research process.

CHAPTER 4

RESULTS

This study investigated the impact of two independent variables, namely background knowledge (or topic familiarity) and time constraint, on ESL reading comprehension. For this purpose a sample of 31 Vietnamese learners of English as a second language attending a high school in Vietnam were selected as subjects. These students were given four cloze reading tasks to complete within three different sessions, two of which were without time limit (45 minutes per task) and two on which a time constraint was imposed (20 minutes per tasks). Two of the reading texts were of familiar topics, whereas the other two were of unfamiliar topics. Each cloze task contained 42 cloze items, which included both content words and function words. This chapter presents the results of the data collected via the cloze procedure in the order of the questions that this study aimed to address.

4.1 Results for Research Questions One and Two

The purpose of research question one was to investigate whether there was any significant impact of topic familiarity and topic unfamiliarity on English reading comprehension among Vietnamese learners of English. On the other hand, research question two aimed to examine whether there was any significant impact of time constraint versus no time constraint on ESL reading comprehension among Vietnamese learners of English. The independent variables were topic familiarity and time constraint. Each variable included two levels, namely topic familiarity and topic unfamiliarity in the former, and time constraint and no time constraint in the latter. The dependent variable was measured by subjects' performance on cloze reading tests, with a possible maximum score of 42 and minimum score of 0. The data was analyzed using SPSS 18.0 statistical software. The impact of background knowledge and time constraint was

examined through descriptive statistics and a two-way analysis of variance. The descriptive statistics are summarized in Table 2.

Table 2

Descriptive statistics for Topic and Time

Independent variables		N	Mean	% success	SD	95% Confidence Interval	
						Lower Bound	Upper Bound
Topic	Familiar	31	17.82	42.4	5.33	17.00	18.65
	Unfamiliar	31	9.92	23.6	2.99	9.10	10.74
Time	Limited	31	11.52	27.4	3.80	10.69	12.34
	Unlimited	31	16.23	38.6	6.58	15.40	17.05

Note: % success was calculated by dividing mean scores by maximum possible score of 42.

As revealed by the descriptive statistics in Table 2, reading comprehension showed different levels of achievement under the impact of both background knowledge and time.

In order to see if the observed differences in Means between the levels of the independent variables were statistically significant (i.e., that differences were systematic and not due to chance), a two-way Analysis of Variance (ANOVA) was performed at $\alpha = .05$. A two-way ANOVA was deemed appropriate in view of the fact that the study included two independent variables and one dependent variable.

Prior to the two-way ANOVA, Levene's test of homogeneity of variances was performed which showed that the assumption of homogenous variances was observed, $F(3,120) = 1.843$, $p = .143$. The fact that the above assumption was observed allowed the two-way ANOVA to be carried out without concerns about the validity of the analysis (see Table 3).

Table 3

Levene's test of equality of error variances

F	df1	df2	Sig.
1.843	3	120	.143

The overall ANOVA results, shown in Table 4 below, indicate that the independent variable topic had a significant effect on the participants' ability to comprehend the cloze reading texts, $F(1,120) = 180.33$, $p < .001$, $partial \eta^2 = .60$. Time also showed a significant effect,

$$F(1,120) = 64.04, p < .001, partial \eta^2 = .35.$$

Table 4

ANOVA summary table

Dependent variables	F (1, 120)	Sig.	Partial Eta Squared
Topic	180.33	.000	.60
Time	64.04	.000	.35
Topic*Time	28.27	.000	.19

More specifically, regarding topic familiarity, subjects achieved significantly greater comprehension under the condition of topic familiarity than under the condition of topic unfamiliarity, as marked by a reading achievement of 42.4% ($M_{\text{familiar}} = 17.82$) vs. 23.6% ($M_{\text{unfamiliar}} = 9.92$) respectively. Similarly, between time conditions, subjects had a significantly better achievement of 38.6% ($M_{\text{unlimited}} = 16.23$) on the test of unlimited time constraint vs. achievement of 27.4% ($M_{\text{limited}} = 11.52$) on the test of limited time constraint. However, of the two independent variables, topic familiarity had a stronger impact on reading performance than time constraint, as shown by the high value of the effect size for topic ($\eta^2 = .60$) and the lower value of the effect size for time ($\eta^2 = .35$).

The interaction between topic and time was also significant $F(1,120) = 28.27, p < .001$, $partial \eta^2 = 0.19$ (see Figure 1). Specifically, topic familiarity in combination with unlimited time condition elicited the best performance on the cloze reading task of all the four different conditions between the levels of the two independent variables.

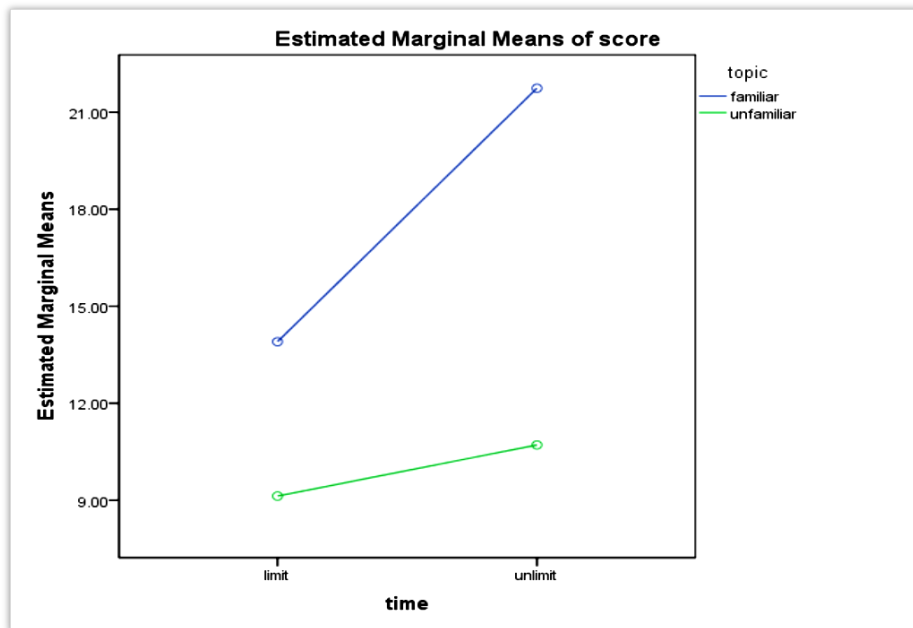


Figure 1. Topic*time line plot

Since ANOVA examines the main effects of the independent variables, in this case, topic familiarity and time given to task, but does not provide statistical investigation of simple effects, the ANOVA was followed by four dependent t-tests in order to examine the simple effects within topic and time.

The first two dependent t-tests examined the effects between familiar and unfamiliar topic within the same time condition, limited and unlimited. As can be seen in Table 5, the participants had a significantly better performance on the reading task of familiar topic with time constraint than on the task of unfamiliar topic with time constraint, $t(30) = 10.26, p < .001$. Specifically, participants achieved a success rate of 33.1% on the familiar topic vs. 21.7% on the unfamiliar topic.

Likewise, the task with familiar topic and no time constraint resulted in a significantly better reading performance than the task with unfamiliar topic and no time constrain, $t(30) = 14.26$, $p < .001$ (See Table 5). Further insights about these differences were provided by the values of the effect size, calculated as *Cohen's d* for dependent t-tests. Of the two paired comparisons, the difference of means was of higher magnitude under the unlimited time condition ($Cohen's d = 2.57$) than the same comparison under limited time ($Cohen's d = 1.84$).

In other words, in the unlimited time condition and on a familiar topic, participants achieved a much higher performance than the other three conditions.

Table 5

Paired sample statistics for levels within time

Paired comparisons	N	Mean	% success	SD	t(30)	Sig. (2-tailed)	Cohen's d
Limited time *Familiar vs. Limited time*Unfamiliar	31	13.90	33.1	3.03	10.26	.000	1.84
Unlimited time *Familiar vs. Unlimited time *Unfamiliar	31	21.74	51.8	4.11	14.26	.000	2.57

Note: % success was calculated by dividing mean scores by maximum possible score of 42.

The other two dependent t-tests were performed to compare the two time conditions within the same topic. In other words, familiar* limited was compared with familiar*unlimited and unfamiliar*limited with unfamiliar*unlimited (see Table 6).

Table 6

Paired sample statistics for levels within topic

Paired comparisons	N	Mean	% success	SD	t(30)	Sig. (2-tailed)	Cohen's d
Familiar*Limited time vs. Familiar*Unlimited time	31	13.90	33.1	3.03	-10.60	.000	1.90
Unfamiliar*Limited time vs. Unfamiliar*Unlimited time	31	9.13	21.7	2.92	-3.56	.001	0.64

Note: % success was calculated by dividing mean scores by maximum possible score of 42.

As can be seen from Table 6, participants performed significantly better on familiar topic text with unlimited time than on familiar topic text with limited time, $t = -10.60$, $p < .001$. Specifically, with familiar topic texts, participants achieved a success rate of 51.8% under unlimited time condition vs. 33.1% under limited time condition.

Similarly, with unfamiliar topic texts, subjects performed slightly better under unlimited time condition than under limited time condition, $t(30) = -3.56$, $p = .001$ (See Table 6). In view of effect size, of the two paired comparisons, the difference of means was of significantly higher magnitude with familiar topics (*Cohen's d* = 1.90) than the same comparison with unfamiliar topics (*Cohen's d* = 0.64). Overall, comparing the values of the four effect sizes (*Cohen's d*), the highest effect was found on the difference in reading performance between unlimited time*familiar vs. unlimited time*unfamiliar (2.57); and the lowest one between unfamiliar topic*unlimited time vs. unfamiliar topic*limited time (0.64). In sum, of all the observed effects, the one with the highest magnitude was observed on the test with familiar topic and in unlimited time condition (See Figure 2).

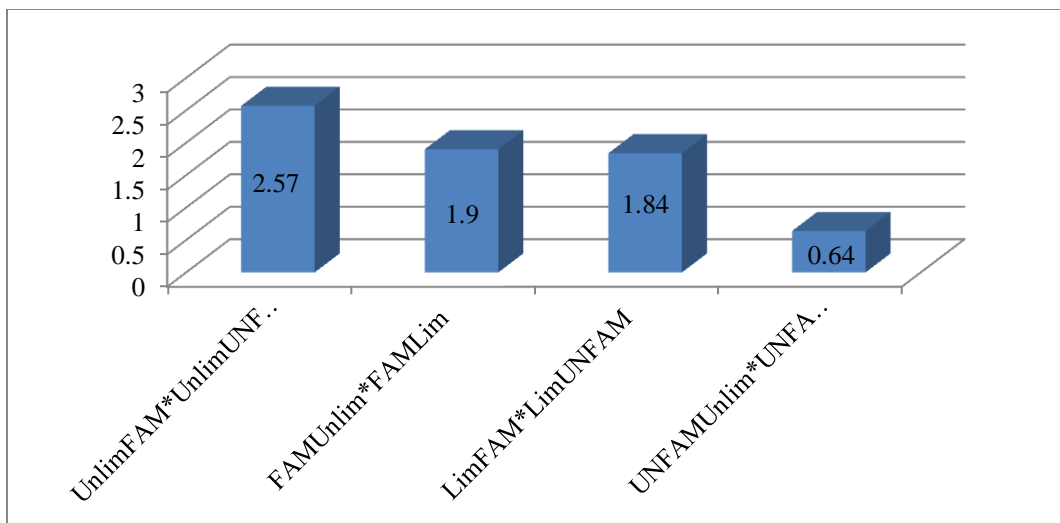


Figure 2: *Cohen's d effect sizes for the four paired comparisons*

To better investigate the interaction effect within both topic and time, Bormuth (1971) scale of reading levels was applied to the individual data. Specifically, according to Bormuth, performance on a cloze test ranging between 0-34% correctness, is classified as frustration level; cloze test performance between 35-49% is considered instructional level reading, and performance of 50% and above is associated with independent level readers. Table 7 summarizes the results from the individual performances in view of Bormuth's scale.

In this study, 20 students (65%) were able to reach the independent level with familiar topic texts and under no time constraint. In contrast, no students could reach this level of independent reading in any of the three remaining conditions. In fact, the majority of the students in the other three conditions were classified as frustration level readers, as the highest numbers were observed in unfamiliar*limited time (30 or 97%) and unfamiliar*unlimited time (28 or 90%).

Table 7

Bormuth's reading levels within test conditions

Bormuth's reading levels	N of participants per reading levels within the four conditions			
	Familiar-limited time	Familiar-unlimited time	Unfamiliar-limited time	Unfamiliar- unlimited time
30-34	21	2	30	28
35-49	9	9	1	3
50-69	1	20	0	0

Additionally, to examine the change in reading comprehension level that each subject reached under different conditions, Table 8 was created based on subjects' individual scores. The most obvious change that can be seen from Table 8 is that 9 subjects who reached the level of independent reading in the test with familiar topic under unlimited time (S2= 55%, S3=67% , S4=64%, S9=55% , S13=50% , S14=60%, S16=60%, S22=55%, and S25=64%) were classified as instructional level readers on the familiar topic text, under limited time condition, and as frustration level readers under the other conditions. Moreover, 11 subjects who reached the level of independent reading on the familiar topic texts under no time constraint (S1=69%, S7=52%, S8=57%, S10=64%, S11=57%, S15=52%, S21=52%, S27=52%, S28=62%, S30=52%, S31=55%) were classified as frustration level readers in all other conditions.

Table 8

Achievement of reading comprehension by each participant on each cloze text.

Subjects	Fami*Lim (%)	Fami*Unlim (%)	Unfami*Lim (%)	Unfami*Unlim (%)
1*	33	69	24	26
2*	43	55	31	36
3*	38	67	33	29
4*	36	64	26	38
5	24	48	10	21
6	26	48	07	24
7*	31	52	12	24
8*	31	57	26	26
9*	38	55	24	33
10*	31	64	26	19
11*	24	57	17	17
12	33	45	24	29
13*	38	50	26	33
14*	43	60	26	29
15	24	52	19	21
16*	43	60	21	33
17*	24	38	17	21
18	33	38	12	19
19	31	38	26	29
20	24	40	12	17
21*	33	52	19	21
22*	52	55	36	43
23	29	33	21	24
24	45	45	24	21
25*	40	64	19	26
26	26	43	17	17
27*	31	52	14	17
28*	29	62	24	17
29	29	33	26	24
30*	31	52	29	24
31*	33	55	26	33

Note: An asterisk (*) identifies subjects who reached the independent level reading on familiar topics without time constraint.

So far, this chapter presented the results from the analysis of the data. Several patterns emerged about the influence of topic familiarity and time constraint on the performance of the participants on the cloze tests in the four test conditions. The interpretation of group and individual results in relation to related theory and research is offered in the next chapter.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

This chapter provides a comprehensive discussion of the findings of the present study in view of related theory and research. Then, potential implications for the teaching of second language reading are drawn upon such findings. The major limitations of the study as well as several recommendations for future research are also included. Finally, this chapter highlights the contribution of this study to the field of teaching English as a second language in general, with particular focus on the instruction of ESL reading.

5.1 Discussion

The primary objective of this study was to investigate the impact of schemata (background knowledge) and time constraint on the reading comprehension of Vietnamese learners of English as a second language. In order to explore the dynamic effects of these two variables, a quantitative method was applied. Thirty-one Vietnamese learners of English as a second language (ESL) from Le Quy Don High School in Vietnam were selected as subjects for the study.

5.1.1 The Impact of Background Knowledge on ESL Reading Comprehension.

According to reading theory and research (e.g. Anderson & Pearson, 1984; Bartlett, 1932; Barnitz, 1985; Carrell et al., 1988; Fisher & Frey, 2009; Hudson, 2007; Rumelhart, 1980; Rumelhart & Ortony, 1977), background knowledge is an important factor in reading comprehension which has been found to play two controversial roles. Whereas a number of studies (e.g. Carrell, 1987; Hudson, 2007) have observed a positive and facilitating effect of background knowledge on reading comprehension; other studies have found the opposite tendency when overreliance on background knowledge has led to misinterpretation of the

reading text (e.g. Alverman, Smith, & Readance, 1985; Johnson, 1981; Lipson, 1983). Stemming from these opposite trends, the current research was conducted to provide further evidence about the role of background knowledge in second language reading.

In the context of the present study, the role of background knowledge was examined by the cloze procedure, which is considered a valid and reliable measurement tool of reading comprehension. Four cloze reading texts, two with familiar topics and two unfamiliar topics, were administered under conditions of time constraint and no time constraint. Each cloze task consisted of 42 cloze items, including both content words and function words.

The results showed a significant impact of background knowledge on reading success. Specifically, a significant difference was found between participants' performance on tasks with familiar topic and the tasks with unfamiliar topic. That is, over and above the time constraint variable, the statistics revealed more cloze items retrieved from the familiar topic texts (51.8% and 33.1%) than from the unfamiliar topic texts (21.7% and 25.5%). In other words, background knowledge seems to play a significant role in students' reading comprehension. This finding is corroborated by the results of several previous studies which support the position that background knowledge has a significant impact on ESL reading comprehension (e.g. Carrell, 1987; Floyd & Carrell, 1987; Johnson, 1982; Keshavarz & Atai, 2007; Liu, 2011; Pritchard, 1990; Steffensen, Joag-Dev & Anderson, 1979). At the same time, the positive role of background knowledge in the context of this study is in contradiction to the findings of Hammadou's (1991) research, which did not find a significant impact of background knowledge on L2 reading comprehension. The discrepancy in the results may be attributed to differences in the research methodologies, operationalization of background knowledge, participants' levels of proficiency, text difficulty and other factors.

Moreover, findings of the current study do not support studies which found negative impacts of background knowledge on reading comprehension (e.g. Lipson, 1983; Alverman, Smith, & Readance, 1985). In these studies, subjects were found to over-dependent on their background knowledge and thus draw wrong information in their recall of the original texts.

5.1.2 The Impact of Time Constraint on ESL Reading Comprehension.

In contrast to the plethora of studies about the effect of background knowledge, time constraint has been given insufficient attention in L2 reading research (Elliot, Braden, & White, 2011). Yet, the concern whether time constraint has an impact on reading comprehension has raised some controversy. In view of this controversy and the lack of empirical evidence of how time constraint affects reading comprehension, this study attempted to provide some insights into the role of time on second language reading.

For the purpose, time constraint was operationalized by two time conditions, limited time (20 minutes) and unlimited time (45 minutes). The results showed that time constraint was also a significant factor as participants' performance was significantly better in the *no* time constraint condition than in the time constraint condition (38.6% vs. 27.4% respectively). Overall, the results revealed that participants performed better on the close tests with no time constraint. This finding is consistent with the results stated in L1 research which purport that the more time subjects have, the better their reading comprehension is (Lesaux, Pearson, & Siegel, 2006; Meyer, Talbot, & Florencio, 1999).

On the other hand, the better performance of the participants in the no time constraint condition challenges previous findings in both L1 (Breznitz, 1987; Breznitz & Share, 1992; Walzyck, Kelly, Meche, & Braud, 1999) and L2 reading research (Chang, 2000; Cushing-Weigle & Jensen, 1996), which claim that moderate time constraint elicits better reading performance

than very limited or unlimited time conditions. One reason for the difference in results between the present study and previous ones could be due to the different operationalizations of time conditions. For example, Walzyck et al. (1999) whose study examined the role of time constraint in L1 reading, mention three time conditions: no time pressure, mild time pressure, and severe time pressure, but they do not specify how much time was, actually, designated to each condition. Further, the subjects in Walzyck et al.'s study were different from the subjects in this study in terms of age and language proficiency, which may be another factor contributing to the difference in results. Moreover, Walzyck et al. used a different instrument to measure reading performance, namely Sentence Verification Technology (SVT), which may also explain the disparity between their results and these of the present study. In L2 research, Chang (2000), and Cushing-Weigle and Jensen (1996) found that students' reading ability was enhanced under the impact of time constraint. It is probable that their results were not supported by the present study because their subjects underwent a rather long training procedure under the time constraint condition, whereas those in this study did not.

Finally, the findings of this research are also in disagreement with the results in the research by Falke (2008), which found no effect of time constraint on reading performance as subjects' scores did not differ significantly in the time pressure and no-time pressure conditions. One reason can be the use of a variety of assessment tools and a large number of texts in Falke's study.

5.1.3 The Interaction between the Impact of Background Knowledge and Time Constraint on ESL Reading.

Having reviewed a number of studies on the role of background knowledge and time constraint, no study was found (at least to this researcher's knowledge) about a potential

interaction effect between background knowledge and time constraint on L2 reading comprehension. For this reason, the discussion in view of this issue is solely based on the results of this study without reference to previous studies.

The interaction between background knowledge and time constraint on ESL reading comprehension was found significant in the statistical results of the two-way ANOVA. This was followed by tests of simple effects in order to understand the interaction effect in depth. The results showed that of all four conditions, participants performed best on the cloze test of familiar topic and no time restriction. This result was supported by the highest effect size of Cohen's d (2.57) of the paired comparison between familiar topic*unlimited time vs. unfamiliar topic*unlimited time among all four paired comparisons. The same tendency was observed when Bormuth (1971) scale of reading levels was applied to the data analysis. Specifically, Bormuth (1971) reading scale associates cloze scores between 0-34% of success with frustration level reading, scores between 35-49% success rate with instructional level reading, and scores equal or higher than 50% with independent level reading. In the current study, a comparison of achievement levels of individual subjects across the four testing conditions revealed a dramatic change of reading levels, such as a subject classified as independent level reader on the test of familiar topic*unlimited time was classified as frustration level reader or instruction level reader in most of the other testing conditions. Further, the results also showed that subjects could only exceed the level of frustration reading when they were provided with a familiar topic. Moreover, without time limitation, their reading level could be raised to independent level. As a results of the interaction, topic familiarity and no time constraint created the most stimulating environment for successful reading comprehension as measured by the cloze procedure.

The above findings have major implications for how the results of standardized assessment are being interpreted and used. Having in mind that L2 reading ability is usually assessed under time constraint and often on unfamiliar topics, it is quite likely that some individual scores may not reveal the students' potential as readers outside the context of standardized testing. Student placement practices in language levels and programs should take into consideration the complex interaction between textual and psychological factors in learners' standardized test scores and should supplement these by other, maybe less reliable, but more valid measures of assessing students' reading ability.

5.2 Pedagogical Implications

Stemming from the findings discussed above, a few implications for teaching English as a Second language are suggested as follows:

Firstly, concerning language teaching, the research revealed a significant impact of background knowledge on reading comprehension; it is highly recommended that besides reading skills, vocabulary, and grammar, content teaching be included in teaching reading to speakers of foreign languages. Especially when preparing for standardized tests such as TOEFL, which uses reading tests from a variety of fields, it is necessary that teachers equip students with as much content area knowledge as possible so as not to disadvantage their students from understanding the texts whose content may be unfamiliar to them.

Regarding language assessment, ESL teachers should be aware that allotting students with more time in reading might increase their performance. As seen by the results of this study, a student's reading performance can dramatically change in relation to topic familiarity and time restriction, to the extent that the same student can be classified at the two ends of the scale, as

frustration level reader and as an independent reader. To attain a highly reliable assessment in ESL reading, these factors should be considered in calculating student achievement.

On another level, particularly in view of preparing students for standardized tests (e.g. TOEFL, IELTS, GRE, etc.), instructors should consider improving students' reading speed by a systematic practice of timed reading in order to help students develop confidence in performing under time pressure, a factor characteristic of any high stakes exam. In addition, building vocabulary and conceptual knowledge in different content areas which are not familiar to the students is also recommended because lack of knowledge in text content might result in students' weakness in reading performance.

In sum, this study argues for a more universal approach to assessment in reading comprehension, especially in an L2 environment. Those developing instruments for assessment should hold the minimization of bias as a general maxim in all cases. The assessment of reading, however, should be taken with the utmost care. While time constraint may be freely lifted or imposed, the design of a reading test requires much more careful attention.

5.3 Limitations and Recommendations for Future Research

As with any research design, this study is not without its own share of design limitations. Firstly, the small sample size (N=31) of this study does not permit the researcher to make strong generalizations about the impact of background knowledge and time constraint on L2 reading. Moreover, the results of this study cannot be generalized to all L2 learners since this research was limited to Vietnamese ESL learners at the age of 17 in a specialized English language class. In addition, the imbalance of genders (7 males to 24 females) is also a possible variable that may affect the results. It is recommended that replications of this research should involve bigger samples which are also balanced in view of gender.

Another limitation concerns the use of the cloze procedure. The difficulty of the texts, measured by Flesch reading ease and Flesch-Kincaid grade level showed a level of around 12 grade for native speakers, which coupled with the challenges posed by the nature of cloze tests may have led to lower level of reading performance and greater difficulties than lower level texts and multiple choice tests would have elicited. Thus, the results of this study are limited to the effects of background knowledge and time constraint on cloze test performance and not other types of reading tests.

In addition, the ordering of the tests may have also influenced the results, especially because they were given in two rather than four administrations. For future studies, it is recommended to administer each test separately and not on the same day.

Finally, this study did not examine participants' errors in completing the cloze tests which could have provided useful insights into the effect of each testing condition on the retrieval of content vs. function words, their ratios, types, and other aspects of the encountered difficulties. For this reason, replication studies are strongly advised to consider a deeper level of analysis of cloze test errors in view of the independent variables and individual subjects' performance.

5.4 Contributions of the Study

Despite the limitations mentioned above, this research has contributed to the existing literature regarding the controversy about the role of background knowledge in L2 reading comprehension. Specifically, this study joins the body of empirical literature which has found a positive effect of background knowledge on second language reading. In other words, the study provides confirmatory evidence about the role of background knowledge in facilitating reading comprehension in a second language.

In addition, this study has been one of only a few focused on the impact of time constraint on reading comprehension in a second language. Specifically, the findings showed that participants benefited from no time constraint rather than time constraint. Further, the current study is the first one which examined the interactive effects of background knowledge and time constraint on L2 reading comprehension. The findings of a significant interaction effect may serve as a motivation for other research in the future to further explore the interactive impact of the internal and external factors on reading comprehension.

Most importantly, this study provided further evidence about the complex nature of reading in general, and of L2 reading, in particular. It should always be remembered that assessing reading is a difficult and challenging task due to the many variables of internal and external nature which partake in this intricate psycholinguistic process. This study examined only two of them, background knowledge and time given to task.

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APPENDICES

APPENDIX A

Informed Consent Form

Dear Participant's parents,

My name is Trang Nguyen. I am a student of the Department of Linguistics at Southern Illinois University, Carbondale, USA. I am currently developing a research study as a part of my Master's Degree in TESOL. In this study, I will examine some issues concerning second language reading comprehension. The study that I am planning to conduct requires participants from Le Quy Don Gifted High School, Quang Tri, Vietnam. The sample will include a total number of 31 participants.

If you agree to let your child participate in my study, he/she will have to complete four reading tasks. Overall, to complete all the tasks there will be three sessions, each of which takes about 45 minutes. Since the participants will take part in 4 different reading tasks, I will need to have his/her name to be able to match his/her performance on the tasks. However, once he/she have completed all tasks, his/her names will be replaced by a number and will be removed from all data files. You must be assured that your child's responses will be **CONFIDENTIAL** and his/her names will not be used in the report of the results.

Your child's participation in the survey is **VOLUNTARY**. If you agree to permit your child to take part in the investigation, you need to sign this form. However, if you change your mind you may ask your child to withdraw at any time without hesitation.

The people who will have an access to the data will be myself, the researcher, and my thesis advisor, Dr. Charkova. After the study is complete, the raw data sheets will be destroyed. All possible steps will be taken to protect your children's identity. Besides, there is NO risk to the students when participating in this study.

For additional information, you can contact me, Trang Nguyen, Project Researcher, 313 E. Mill st, Apt # 8, Carbondale, IL, 62901, USA; email: trangn@siu.edu or Dr. Krassimira Charkova, Research advisor, Department of Linguistics, Faner building 3225, SIUC, Carbondale, IL, 62901, USA; Office tel.: (618) 453-3425, e-mail: sharkova@siu.edu

The project has been reviewed and approved by SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the committee Chairperson, Office of Research Development and Administration, Southern Illinois University, Carbondale, Illinois, 62901-4709, USA. Phone (618) 453-4533. Email: siuhsc@siu.edu.

Thank you for your precious collaboration and assistance in this research.

I have read the material above, and any questions that I asked have been answered to my satisfaction. I understand a copy of this form will be made available to me for relevant information and phone numbers. I realize that I may ask my child to withdraw without prejudice at any time.

Name _____ Signature _____

APPENDIX B

Informed Consent Form – Translated

PHIẾU CHẤP THUẬN

Kính gửi phụ huynh học sinh,

Tôi tên là Nguyễn Trang, sinh viên cao học tại Khoa Ngôn Ngữ trường đại học Nam Illinois, Carbondale, Mỹ. Hiện nay tôi đang tiến hành đề tài nghiên cứu để hoàn thành chương trình thạc sĩ chuyên ngành giảng dạy tiếng Anh. Đề tài nghiên cứu của tôi liên quan đến vấn đề đọc hiểu khi học ngoại ngữ. Để thực hiện đề tài này, tôi cần sự tham gia của tổng cộng 31 học sinh lớp 11 chuyên Anh đang theo học tại trường THPT chuyên Lê Quý Đôn, Tỉnh Quảng Trị, Việt Nam.

Nếu ông/bà đồng ý cho con của mình tham gia vào cuộc khảo sát này, con của ông /bà sẽ phải hoàn tất 4 bài điền từ. Tổng cộng tất cả có 3 đợt tương với 3 tiết học. Vì có đến 4 bài đọc khác nhau nên đầu tiên, tôi sẽ cần lấy tên của con ông/bà để có thể nhận biết được bài làm của mỗi em. Sau khi các em đã hoàn tất 4 bài đọc, tên của các em sẽ bị xóa đi và thay bằng số. Câu trả lời của con ông/bà sẽ được được đảm bảo **BÍ MẬT** và tên của con ông/bà cũng sẽ không được nêu ra trong phần báo cáo kết quả của nghiên cứu.

Xin lưu ý là việc tham gia vào nghiên cứu này là hoàn toàn **TỰ NGUYỆN**. Nếu ông/bà đồng ý, xin hãy ký vào phiếu này. Tuy nhiên, nếu ông/bà có thay đổi ý định thì có thể yêu cầu con ông/bà rút tên khỏi cuộc khảo sát.

Chỉ có 2 người được phép tiếp cận đó là tôi - người tiến hành nghiên cứu khảo sát và Tiến sĩ Krassimira Charkova, chủ tịch hội đồng luận văn của tôi. Sau khi đề tài nghiên cứu hoàn tất, tất cả dữ liệu trên giấy tờ sẽ được hủy. Chúng tôi cũng sẽ tiến hành các biện pháp cần thiết để bảo vệ danh tính của con ông/bà. Ngoài ra không có bất kỳ rủi ro nào liên quan đến cuộc khảo sát này.

Để biết thêm thông tin chi tiết, ông bà có thể liên hệ tôi theo địa chỉ: 313 E. Mill Apt 8, Carbondale, IL 62901, tel: (408) 688 4559, email: trangn@siu.edu hoặc Tiến sĩ Krassimira Charkova, Thesis Committee Chair, Department of Linguistics, Faner Hall 3223, SIUC, Carbondale, IL 62901, Office tel.: (618) 453-3425, e-mail: sharkova@siu.edu.

Tôi đồng ý để con tôi tham gia cuộc nghiên cứu được tiến hành bởi Nguyễn Thị Thùy Trang dưới sự giám sát của Tiến sĩ Krassimira Charkova, khoa ngôn ngữ, Southern Illinois University Carbondale. Tôi đưa ra quyết định này dựa trên thông tin tôi đã đọc ở phiếu chấp thuận. Tôi ý thức rằng tôi có thể yêu cầu con tôi rút lui khỏi cuộc khảo sát bất kỳ lúc nào.

Đề tài này đã được xem xét và chấp thuận bởi ban quản lý nghiên cứu thuộc trường ĐH SIUC. Ông bà có thể liên hệ chủ tịch ban để biết thêm quyền của con ông bà khi tham gia đề tài này theo địa chỉ sau: Office of Research Development and Administration, Southern Illinois University, Carbondale, Illinois 62901 – 4709. Phone (618) 453-4533. Email: siuhsc@siu.edu .

Cuối cùng, trân trọng cảm ơn sự trợ giúp quý báu của ông bà.

Chấp thuận

(ký tên)

APPENDIX C

Informed Assent Form

Dear Participant,

My name is Trang Nguyen. I am a student in the Department of Linguistics at Southern Illinois University, Carbondale, U.S.A. I am currently developing a research study as a part of my Master's Degree in TESOL. In this study, I will examine some issues concerning second language reading comprehension. The study that I am planning to conduct requires participants from Le Quy Don Gifted High School, Quang Tri, Vietnam. The sample will include a total number of 31 participants.

If you agree to participate in my study, you will have to complete four reading tasks. Overall, to complete all the tasks, there will be three sessions, each of which takes about 45 minutes. Since you will take part in 4 different reading tasks, I will need to have your names to be able to match your performance on the tasks. However, once you have completed all tasks, your names will be replaced by a number and will be removed from all data files. You must be assured that your responses will be **CONFIDENTIAL** and your name will not be used in the report of the results.

Your participation in the survey is **VOLUNTARY**. If you agree to take part in the investigation, you need to sign this form. However, if you change your mind you may withdraw at any time without hesitation.

The people who will have an access to the data will be myself, the researcher, and my thesis advisor, Dr. Charkova. After the study is complete, the raw data sheets will be destroyed. All possible steps will be taken to protect your identity.

For additional information, you can contact me, Trang Nguyen, Project Researcher, 313 E.Mill st, Apt # 8, Carbondale, IL, 62901, USA; email: trangn@siu.edu or Dr. Krassimira Charkova, Research advisor, Department of Linguistics, Faner building 3225, SIUC, Carbondale, IL, 62901, USA; Office tel.: (618) 453-3425, e-mail: sharkova@siu.edu

The project has been reviewed and approved by SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the committee Chairperson, Office of Research Development and Administration, Southern Illinois University, Carbondale, Illinois, 62901-4709, USA. Phone (618) 453-4533. Email: siuhsc@siu.edu.

Thank you for your precious collaboration and assistance in this research.

I have read the material above, and any questions that I asked have been answered to my satisfaction. I understand a copy of this form will be made available to me for relevant information and phone numbers. I realize that I may withdraw without prejudice at any time.

Name _____ Signature _____

APPENDIX D

Letter to the Principal of Le Quy Don High School in Quang Tri, Vietnam

Dear Mr. Nhan Nguyen,

My name is Trang Nguyen. I am a student of the Department of Linguistics at Southern Illinois University, Carbondale, USA. I am currently developing a research study as a part of my Master's Degree in TESOL. In this study, I will examine some issues concerning second language reading comprehension. The study that I am planning to conduct requires participants from Le Quy Don Gifted High School, Quang Tri, Vietnam. The sample will include a total number of 31 participants.

I would like to ask your permission to carry out the research with the students from the 11th grade English major class, under the management of Ms.Hanh Hoang. If you agree to let the students participate in my study, they will have to complete four reading tasks. Overall, to complete all the task there will be three sessions, each of which takes about 45 minutes. Since the participants will take part in 4 different reading tasks, I will need to have their names to be able to match their performance on the tasks. However, once they have completed all tasks, their names will be replaced by a number and will be removed from all data files. You must be assured that the students' responses will be **CONFIDENTIAL** and their names will not be used in the report of the results.

The students' participation in the survey is **VOLUNTARY**. If you agree to permit the students to take part in the investigation, you need to sign this form. However, if you change your mind you may ask the students to withdraw at any time without hesitation.

The people who will have an access to the data will be myself, the researcher, and my thesis advisor, Dr. Charkova. After the study is complete, the raw data sheets will be destroyed. All possible steps will be taken to protect the students' identity. Besides, there is **NO** risk to the students when participating in this study.

For additional information, you can contact me, Trang Nguyen, Project Researcher, 313 E.Mill st, Apt # 8, Carbondale, IL, 62901, USA; email: trangn@siu.edu or Dr. Krassimira Charkova, Research advisor, Department of Linguistics, Faner building 3225, SIUC, Carbondale, IL, 62901, USA; Office tel.: (618) 453-3425, e-mail: sharkova@siu.edu

The project has been reviewed and approved by SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the committee Chairperson, Office of Research Development and Administration, Southern Illinois University, Carbondale, Illinois, 62901-4709, USA. Phone (618) 453-4533. Email: siuhsc@siu.edu.

Thank you for your precious collaboration and assistance in this research.

I have read the material above, and any questions that I asked have been answered to my satisfaction. I understand a copy of this form will be made available to me for relevant information and phone numbers. I realize that I may ask the students withdraw without prejudice at any time.

Name _____ Signature _____

APPENDIX E

Letter to the Principal of Le Quy Don High School in Quang Tri, Vietnam – Translated

Kính gửi ông Nguyễn Văn Nhân,

Tôi tên là Nguyễn Trang, sinh viên cao học tại Khoa Ngôn Ngữ trường đại học Nam Illinois, Carbondale, Mỹ. Hiện nay tôi đang tiến hành đề tài nghiên cứu để hoàn thành chương trình thạc sĩ chuyên ngành giảng dạy tiếng Anh. Đề tài nghiên cứu của tôi liên quan đến vấn đề đọc hiểu trong học ngoại ngữ. Để thực hiện đề tài này, tôi cần sự tham gia của tổng cộng 31 học sinh lớp 11 chuyên Anh đang theo học tại trường THPT chuyên Lê Quý Đôn, Tỉnh Quảng Trị, Việt Nam.

Tôi viết phiếu này, rất mong nhận được sự đồng ý từ phía ông cho phép học sinh lớp 11 chuyên Anh tham gia vào nghiên cứu này, dưới sự giám sát của cô giáo Hoàng Thị Mỹ Hạnh. Nếu ông đồng ý cho học sinh tham gia vào cuộc khảo sát này, các học sinh sẽ phải hoàn tất 4 bài điền từ. Tổng cộng tất cả có 3 đợt tương với 3 tiết học. Vì có đến 4 bài đọc khác nhau nên đầu tiên, tôi sẽ cần lấy tên của học sinh để có thể nhận biết được bài làm của mỗi em. Sau khi các em đã hoàn tất 4 bài đọc, tên của các em sẽ bị xóa đi và thay bằng số. Câu trả lời của các học sinh sẽ được được đảm bảo **BÍ MẬT** và tên của các học sinh cũng sẽ không được nêu ra trong phần báo cáo kết quả của nghiên cứu.

Xin lưu ý là việc tham gia vào nghiên cứu này là hoàn toàn **TỰ NGUYỆN**. Nếu ông đồng ý, xin hãy ký vào phiếu này. Tuy nhiên, nếu ông có thay đổi ý định thì có thể yêu cầu các học sinh rút tên khỏi cuộc khảo sát.

Chỉ có 2 người được phép tiếp cận dữ liệu nghiên cứu đó là tôi - người tiến hành nghiên cứu khảo sát và Tiến sĩ Krassimira Charkova, chủ tịch hội đồng luận văn của tôi. Sau khi đề tài nghiên cứu hoàn tất, tất cả dữ liệu trên giấy tờ sẽ được hủy. Chúng tôi cũng sẽ tiến hành các biện pháp cần thiết để bảo vệ danh tính của các học sinh. Ngoài ra không có bất kỳ rủi ro nào liên quan đến cuộc khảo sát này.

Để biết thêm thông tin chi tiết, ông có thể liên hệ tôi theo địa chỉ: 313 E. Mill Apt 8, Carbondale, IL 62901, tel: (408) 688 4559, email: trangn@siu.edu hoặc Tiến sĩ Krassimira Charkova, Thesis Committee Chair, Department of Linguistics, Faner Hall 3223, SIUC, Carbondale, IL 62901, Office tel.: (618) 453-3425, e-mail: sharkova@siu.edu.

Đề tài này đã được xem xét và chấp thuận bởi ban quản lý nghiên cứu thuộc trường ĐH SIUC. Ông có thể liên hệ chủ tịch ban để biết thêm quyền của các học sinh khi tham gia đề tài này theo địa chỉ sau: Office of Research Development and Administration, Southern Illinois University, Carbondale, Illinois 62901 – 4709. Phone (618) 453-4533. Email: siuhsc@siu.edu .

Cuối cùng, trân trọng cảm ơn sự trợ giúp quý báu của ông.

Tôi đã đọc kỹ những nội dung ở trên và mọi thắc mắc đã được giải đáp một cách thỏa đáng. Các thông tin liên quan cũng như số điện thoại liên lạc đều được tôi giữ lại 1 bản sao. Tôi ý thức rằng tôi có thể yêu cầu các học sinh rút tên khỏi cuộc khảo sát bất kỳ lúc nào.

Chấp thuận
(ghi ngày tháng và ký tên)

APPENDIX F

Translation Confirmation

To whom it may concern,

My name is Diep Duong. I am a Vietnamese student, currently doing PhD at Political Science Department at SIUC, USA. After having read through the two versions, the Informed Consent Form and the Letter to The Principal in English and Vietnamese, I would like to confirm that the two versions are exactly the same in content and organization.

If you have any questions or concern, please contact me by diep.duong@siu.edu or at 618-660-8848

Signature

Diep Duong

APPENDIX G

Cloze Text With Familiar Topic And Limited Time

Student's full name: _____

Read the text below and fill in each blank with ONE suitable word that best fits in the context. You have 20 minutes to do this.

Ao dai

The traditional Vietnamese costume known as the Ao dai is said to hide everything—and to hide nothing. A full-length, high-neck tunic that covers almost every (1)_____ of a woman's body, the outfit is so (2)_____ that it leaves little to the imagination.

Originally (3)_____ from royal Chinese court clothing in the 1930s, (4)_____ style went out of fashion in the late (5)_____ century. Recently, however, its return has been widely (6)_____, and thus the Ao dai has bloomed at an (7)_____ speed. The Ao dai has become a rich source (8)_____ inspiration for fashion designers as they create new (9)_____ and spread them throughout the world.

Formerly worn (10)_____ an indicator of social standing, the Ao dai was (11)_____ by women of higher social status as it (12)_____ the appearance of an elegant yet demure garment. (13)_____, wide-legged trousers were traditionally worn under a high-necked, (14)_____ fitted tunic with slits along each side. In (15)_____ days, Vietnamese men also wore Ao dai of mandarin (16)_____. A tunic shorter and fuller than that of (17)_____ female counterpart, the suit's color similarly traditionally reflected (18)-_____ man's class and social standing.

Today, Ao dai (19)_____ worn primarily by women for more formal (20)_____. In Hue, home to Vietnam's 19th-century emperors (21)_____ the geographical and spiritual heart of the (22)_____, the locals can think of no lovelier sight (23)_____ the one offered on festival mornings when groups (24)-_____ young women pedal their bicycles down the misty (25)_____ banks of the Perfume River. Their long Ao Dai (26)_____ in the fresh morning breeze, while their fair (27)_____ is hidden from the early sun under elegant (28)_____ gloves and beautiful bamboo hats.

"When they (29)_____ here, the tourists think that maybe we Vietnamese (30)_____ like the Chinese, that we all wear Mao (31)_____ and do not understand the beauty of the (32)_____ form," our tour guide told us, a bit (33)_____. "But we had no Cultural Revolution here. We (34)_____ told the painters to stop painting. There is (35)_____ romance in everything we do. Even if the (36)_____ sometimes has an unhappy ending."

The grace and (37)_____ that the Ao dai brings to Vietnamese girls exudes (38)_____ unique charm, attracting a new generation of travelers, (39)_____ and film makers, fashion designers and writers to (40)_____ nation of nearly 72 million people that has (41)_____ after years of isolation to open itself to (42)_____ world once more.

APPENDIX H

Cloze Text with Unfamiliar Topic And Limited Time

Student's full name: _____

Read the text below and fill in each blank with ONE suitable word that best fits in the context.

You have 20 minutes to do this.

Kente

The dazzling, colorful costume of Western Africa is famous under the name of "kente." Bearing the iconic symbol of "Black pride," the (1)_____ is said to help many blacks appreciate the (2)_____ in the African-American. A story concerning this pride (3)_____ about a black lawyer in Washington who refused (4)_____ white judge's order to remove his Kente cloth (5)_____ in the courtroom. According to the lawyer, the (6)_____ action was "an insult to black people nationwide." (7)_____ itself refers to a wide variety of richly (8)_____ cloths principally produced by the Ashanti and the (9)_____ whose development predates the arrival of Europeans on (10)_____ African continent by several centuries. Long worn by (11)_____ African royalty to signify power, prestige and a (12)_____ of elite style, the Kente is usually woven (13)_____ cotton, silk, and occasionally gold thread. Presently however, (14)_____ the ordinary populace among the Asante greatly outnumbers (15)_____ royalty, Kente costumes are worn widely by people (16)_____ every social tier.

Over the several centuries that (17)_____ have been developing and refining the Kente, thousands (18)_____ types and patterns have been created. Yet each (19)_____ is described by a distinct name. Some refer (20)_____ proverbs, animals or trees, while others refer to (21)_____ pattern worn by Ashanti kings or priests when (22)_____ with potentially dishonest people. Generally, each color and (23)_____ woven into a kente cloth represents a particular (24)_____. Some examples of red and yellow combinations suggesting (25)_____ and its power over sickness; green and white, (26)_____ bountiful harvest, and blue, which means love, embodies (27)_____ and rules of the queen mother.

Men and (28)_____ are distinguished by the way in which they (29)_____ and wear the Kente cloth. While men produce (30)_____ of a narrow band, women make cloths of (31)_____ wider wefts. The cloth is generally wrapped and (32)_____ on the body, toga-fashion for males, leaving the (33)_____ shoulder exposed, covering the left, with the bottom (34)_____ an inch from the ground. Females, on the (35)_____ hand, typically wear a Kente cloth as a (36)_____ skirt, either above or below the breast.

Albeit (37)_____ not an overly splendid garment or the representation (38)_____ a refined aesthetic sensibility and a remarkable technical (39)_____, the Kente encodes and expresses sociopolitical values and (40)_____ meanings. The names of cloths and patterns, the (41)_____, role-specific wearing of the cloth, and the styles (42)_____ protocol of fabric display are all embedded in the history of the Kente and give evidence to an exceptionally rich and meaningful tradition.

APPENDIX I

Cloze Text with Familiar Topic And Unlimited Time

Student's full name: _____

Read the text below and fill in each blank with ONE suitable word that best fits in the context. You have 45 minutes to do this.

Tet

Annually at the beginning of spring, allegedly the first day of lunar calendar, the traditional New Year Festival or Tet is celebrated throughout Vietnam. This is one of the largest and the (1)_____ significant holidays to the Vietnamese people. Every Vietnamese, (2)_____ those who have left for far-flung cities, returns (3)_____ their homeland for a reunification with the family.

(4)_____ the Tet holiday officially begins on the first (5)_____ of lunar year, the lively atmosphere of the (6)_____ holiday is facilitated by preparation nearly one week (7)_____. The streets are garnished lavishly with colorful lights, (8)_____ and flowers, teeming with people. Peach blossoms and (9)_____, which are typical in the North, and apricot (10)_____ of the South flourish competitively among thousands of (11)_____ trees and flowers to welcome the Spring.

The (12)_____ day of the 12th lunar month hosts a (13)_____ of farewell for Kitchen Gods (Tao Quan)." These three Spirits (14)_____ the Hearth—found in the kitchen of every (15)_____ ascend to the heaven to report the past (16)_____ events to the Heavenly Emperor. In observation of (17)_____ lucky day, altars are cleaned and displayed with (18)_____ including mam ngu qua (a five-fruit tray), banh chung (a small (19)_____ cake made of glutinous rice), incense burners, flower (20)_____ and portraits of the deceased for ancestors' visit.

(21)_____ New Year's Eve, the last night of the (22)_____ Lunar year is the sacred, special time as (23)_____ marks the transition from the old to the (24)_____ Year. Fireworks fill the air exactly at 12:00 am, (25)_____ the New Year's arrival. At this stroke of (26)_____, all worries from the previous year are left (27)_____ and troubles ensue. Additionally, the first guest (xong dat) to (28)_____ a house is believed to determine the family's (29)_____ and prosperity for the whole year, therefore this (30)_____ is preferably designated beforehand. During the Tet holiday, (31)_____ come to visit each other in their houses. (32)_____ wine, sugared fruits, watermelon seeds, and banh chung are (33)_____ present when receiving guests. People exchange hearty greetings, (34)_____ kids receive lucky money (li xi) from adults as wishes (35)_____ a successful year.

Under the impact of social (36)_____, many rituals related to Tet have been modified (37)_____ even lost; but the spirit of Tet still (38)_____ alive in each person, in each family and (39)_____ all of society. Tet will remain forever a (40)_____ of the gratitude that descendents feel toward their (41)_____, and the symbol of a harmonious society built (42)_____ compassionate families.

APPENDIX J

Cloze Text with Unfamiliar Topic And Unlimited Time

Student's full name: _____

Read the text below and fill in each blank with ONE suitable word that best fits in the context. You have 45 minutes to do this.

Sagaalgaan

The New Year is welcomed with boundless enthusiasm throughout Russia, yet in one region, a particularly unique celebration is observed. This month-long festival, known as Sagaalgaan, is celebrated (1)_____ the Buryat tribes of Eastern Siberia.

Sagaalgaan, whose (2)_____ literally means "Holiday of the White Month," is (3)_____ to have originated as an autumn festival among (4)_____ Mongol tribes. During the 18th century, however, the (5)_____ of the holiday was officially moved to the (6)_____; under Buddhist influences, its observance became strongly associated (7)_____ the triumph of good over evil. Conventionally, the (8)_____ Sagaalgaan begins on the first day of the (9)_____ New Year, which usually falls in January or (10)_____.

Prior to the celebration of Sagaalgaan, a beautifully (11)_____ ceremony called Dugzhuba is traditionally held in every (12)_____ temple. Devout lamas light great bonfires as they (13)_____, lifting both their hearts and voices heavenward; as (14)_____ magnificent fire burns, it consumes the transgressions of (15)_____ past year. "As you look upon the blazing (16)_____, " the lama describes "reflect upon the sins of (17)_____ past year. The ashes will erase your every (18)_____ the moment you turn away and cease to (19)_____ upon the fire." On the eve of Sagaalgaan, (20)_____ righteous and unrighteous spend the whole night in (21)_____ temples as they pray for a coming year (22)_____ plenty.

Sagaalgaan is celebrated on the central square, (23)_____ is characterized by the presence of horses and (24)_____ songs and dance. People of all ages, whether (25)_____ in traditional delds or in dark modern attires, (26)_____ around the rim of the square to watch (27)_____. Parades of riders on horseback representing different villages (28)_____ across the square. Elderly Buryats in traditional dress (29)_____ up symbolic offerings of silk scarves and burning (30)_____.

Following the formal rites is a 30-day period (31)_____ peace, happiness, and hope, of rekindling the bond (32)_____ individual and community values. On the first day (33)_____ Sagaalgaan, the faithful rise before dawn to greet (34)_____, the Buddhist goddess. Dairy products, sheep heads and (35)_____ foods may be found in every home, for (36)_____ represent the culture of hospitality that so defines (37)_____ festivity. Gracious hosts welcome guests with offerings of (38)_____ and buzi (steamed meat dumplings). Vibrant colors, hearty (39)_____ and a warm atmosphere of drink, dance and (40)_____ are the essence of Sagaalgaan.

Despite the dramatic (41)_____ of Aginsk from an independent principality to a (42)_____ region in 2010, Buryat culture still maintains the significance of Sagaalgaan, one of the world's oldest New Year celebrations, as a symbol of their culture, tradition and community.

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Thesis Title:

The Impact of Background Knowledge and Time Constraint on Reading Comprehension of Vietnamese Learners of English as A Second Language

Major Professor: Krassimira Charkova