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교육학석사학위논문

Lexical Inferencing and L2 Reading
Comprehension of Korean EFL
Middle School Learners

한국인 EFL 중학생들의 어휘 추론과 영어 독해

2020년 8월

서울대학교 대학원
외국어교육과 영어전공
박 세 희

Lexical Inferencing and L2 Reading
Comprehension of Korean EFL
Middle School Learners

by
Sehee Park

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ABSTRACT

Lexical Inferencing and L2 Reading Comprehension
of Korean EFL Middle School Learners

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Lexical inferencing has received a considerable amount of attention in the literature on second language reading and vocabulary learning. The present study has continued that focus by investigating the lexical inferencing made by Korean EFL middle school students when they encountered unfamiliar words in English texts. The study examined the relationship between learners' lexical inferencing and their L2 reading proficiency with respect to the level of success they achieved in guessing and the knowledge sources used in the process. The study was conducted in a middle school where students' average English level of students was at an intermediate B1 CEFR level of English. For the experiment, 97 students of three distinct proficiency levels participated. They completed a questionnaire to self-report on their behaviors when processing

unknown words while reading, took a reading proficiency test, and performed a lexical inferencing task. Further, a total of 6 participants participated in think-aloud protocols, two from each of the three groups. The findings revealed marked variations in both quantitative and qualitative aspects of lexical inferencing across three distinct reading proficiency levels. They indicated that the success of lexical inferencing plays a prominent role in reading comprehension with statistical significance. As proficiency develops, readers showed more appropriate and strategic use of knowledge sources in the process of inferring word meanings. Pedagogical implications of the findings of the study and suggestions for further research are stated.

Key Words: lexical inferencing, L2 reading proficiency, knowledge sources

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TABLE OF CONTENTS

ABSTRACT	i
TABLE OF CONTENTS	iii
LIST OF TABLES	vi
LIST OF FIGURES	vii
CHAPTER 1. INTRODUCTION	1
1.1. The Background and Statement of the Problem	1
1.2. Aims of the Research	6
1.3. Research Questions	7
1.4. Organization of the Thesis	8
CHAPTER 2. LITERATURE REVIEW	9
2.1. Lexical Inferencing	9
2.2. Knowledge Sources in Lexical Inferencing	12
2.3. Factors of Success in L2 Lexical Inferencing	16
2.3.1. Contextual Factors	16
2.3.2. Learner Factors	21
2.4. Lexical Inferencing and L2 Reading Proficiency	24

CHAPTER 3. METHODOLOGY	28
3.1. Pilot Studies	28
3.2. The Main Study	29
3.2.1. Participants.....	30
3.2.2. Instruments	32
3.2.2.1. Questionnaire	32
3.2.2.2. Reading Comprehension Test	33
3.2.2.3. Lexical Inferencing Task	34
3.3. Procedure	37
3.4. Data Analysis	38
CHAPTER 4. RESULTS AND DISCUSSION	41
4.1. L2 Learners' Behaviors in Dealing with an Unknown Word	41
4.2. L2 Learners' Preferred Knowledge Sources in Lexical Inferencing	45
4.3. The Relationship between Lexical Inferencing and L2 Reading Proficiency	48
4.4. The Patterns of Use of Knowledge Sources in Lexical Inferencing	52
4.4.1. Use of Top-down vs. Bottom-up Processing	52
4.4.2. Use of Interactive Processing in Skilled L2 Readers' Lexical Inferencing	57

CHAPTER 5. CONCLUSION.....	65
5.1. Summary of Key Findings	65
5.2. Pedagogical Implications	67
5.3. Implications for Further Research	70
 REFERENCES	 72
 APPENDICES.....	 80
 국문초록.....	 84

LIST OF TABLES

TABLE 2.1 Bengelil and Paribakht's Taxonomy of Knowledge Source Use in L2 Lexical Inferencing	14
TABLE 2.2 Laufer's Categorization of Contextual Clues that a Reader cannot Guess	19
TABLE 3.1 Information of Participants in Different Proficiency Levels	31
TABLE 3.2 The List of Target Words from Two Target Reading Passages	35
TABLE 3.3 A Summary and Time Line of the Research Design	37
TABLE 4.1 Frequency of the Way Learners Deal with Unknown Words	42
TABLE 4.2 Frequency of Learners' Preferred Knowledge Sources	46
TABLE 4.3 The Descriptive Statistics of the Data of Lexical Inferencing	48
TABLE 4.4 The Descriptive Statistics of the Data of English Reading Proficiency.....	49

LIST OF FIGURES

FIGURE 4.1 Correlation between L2 Reading Proficiency and Lexical Inferencing	50
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CHAPTER 1.

INTRODUCTION

The current research investigates the Korean EFL learners' use of lexical inferencing strategy and explores the way it relates with their L2 reading proficiency. This chapter introduces the research by providing the motivation and the organization of the thesis. Section 1.1 discusses the background and the statement of the problem. Section 1.2 presents aims of the research, followed by the research questions in Section 1.3. Section 1.4 outlines the overall organization of the thesis.

1.1. The Background and Statement of the Problem

It is widely acknowledged that vocabulary knowledge has a pivotal role in learners' reading comprehension. However, L2 readers are constantly confronted with unfamiliar words and their limited vocabulary knowledge constitutes a major contributor to L2 reading difficulty. Previous research demonstrates that L2 learners have several strategic options to choose when they encounter an unknown word while reading – “to ignore and continue reading, consult a dictionary or a person, or infer” (Fraser, 1999, p. 226). The latter, referred to as lexical

inferencing, is to guess the meaning of a word on the basis of linguistic or contextual cues. While a variety of definitions of the term ‘lexical inferencing’ have been suggested, the definition proposed by Haastруп (1991) continues to be widely used:

The process of lexical inferencing involves making informed guesses as to the meaning of a word in light of all available linguistic cues in combination with the learner’s general knowledge of the world, her awareness of context and her relevant linguistic knowledge (p. 13).

Lexical inferencing has been reported to be the primary lexical processing strategy that L2 learners make use of in dealing with unknown words (Nation, 2001). Moreover, it is often perceived as one of the most practical and popular approaches to lexical processing in learners’ interaction with texts (Fraser, 1999; Haastруп, 1991). As a result, investigating the way L2 readers process unfamiliar lexical items has received considerable attention in many empirical studies (e.g., Bengelil & Parihakht, 2004; Hu & Nassaji, 2014; Kaivanpanah & Alavi, 2008; Kaivanpanah & Moghaddam, 2012; Laufer, 1997; Nassaji, 2006; Qian, 2004; Teng & He, 2015). This line of research has documented a wide range of factors that affect the success of lexical inferencing, such

as the types of knowledge sources (Kaivanpanah & Moghaddam, 2012; Nassaji, 2003), vocabulary knowledge (Hatami & Tavakoli, 2012; Kim, 2010), background knowledge (Kim, 2010; Pulido, 2007), linguistic knowledge (Chen, 2018; Hamada, 2014; Zhang & Koda, 2012), and L2 proficiency (Bengeleil & Parihakht, 2004; Lee & Lee, 2012; Parel, 2004).

The existing body of research on learners' vocabulary strategy use suggests that L2 learners with higher vocabulary proficiency make more attempts to generate the meanings of an unknown word while reading than L2 learners with lower vocabulary proficiency (Han, 2014; Harley & Hart, 2000; Kim & Cha, 2008; Park, 2019). These survey studies reported that guessing from context was one of the most frequent strategies that more competent learners employed when they encountered an unfamiliar word. In particular, while less proficient Korean EFL learners enjoyed using a bilingual dictionary, more fluent learners showed a various use of vocabulary strategies, such as looking up a bilingual dictionary and analyzing the morphological structure of a word.

So far, several attempts have been made to explore the relationship between lexical inferencing and L2 reading proficiency. While the existing research has investigated the actual practice of learners' lexical

inferencing, only a few studies have attempted to examine the way successful readers differed from less successful readers with regard to their ability to infer word meanings (e.g., Bengeleil & Parihakht, 2004; Kaivanpanah & Moghaddam, 2012; Parel, 2004). It was found that more proficient readers were not only more successful in lexical inferencing (Parel, 2004; Prior et al., 2014) but also more skilled in benefiting from a variety of knowledge sources than less skilled readers (Bengeleil & Paribakht, 2004; Kaivanpanah & Moghaddam, 2012).

However, due to practical constraints, previous studies were carried out utilizing either quantitative or qualitative research methods, which in turn makes it still unclear as to how L2 learners' inferencing strategy use relates to their reading performance with respect to the use of knowledge sources and the level of success they achieve (Bengeleil & Parihakht, 2004; Kaivanpanah & Moghaddam, 2012; Parel, 2004). For example, some of the studies that assessed students' cognitive processes of lexical inferencing based on think-aloud protocols have been conducted in very few cases, which seem to be limited in providing a comprehensive overview of the relationship between lexical inferencing strategy and other variables (e.g., learner variables) (Bengeleil & Paribakht, 2004; Lee & Lee, 2012). While these studies made a detailed analysis of learners' lexical inferencing, its relationship with reading performance is

rather inconclusive due to a small number of non-representative participants. On the other hand, other quantitative studies that looked at learners' inferencing practice without using think-aloud research methods have been criticized for neglecting the nature of lexical inferencing which "involves a combination of cues, knowledge, and contextual awareness, a crucial aspect of that context" (Deschambault, 2012, p. 267) (Bensoussan & Laufer, 1984; Cain, Oakhill & Lemmon, 2004; Kaivanpanah & Moghaddam, 2012; Kim, 2010).

In Korean contexts, a number of studies have been concerned with roles of vocabulary knowledge in reading performance in the field of L2 vocabulary and reading research (e.g., Choi, 2013; Kang, Kang & Park, 2012; Kim & Cho, 2013; Shin, 2011; Shin & Kim, 2012). Up to now, however, only a few studies have begun to give attention to the relationship between lexical inferencing and English reading comprehension (e.g., Kim, 2010; Lee & Lee, 2012). Yet, the existing accounts fail to address the learners' lexical inferencing in much detail, because the studies have been rather too broad in focus dealing with two or more variables, and the evidence for the association between Korean EFL learners' lexical inferencing and their reading proficiency remains unclear.

1.2. Aims of the Research

The primary purpose of the study is to explore the Korean EFL learners' lexical inferencing behaviors and their relationship with L2 reading proficiency. Given that lexical inferencing plays a key role in reading, conducting further research as to how Korean EFL learners perceive and practice lexical inferencing and how their lexical inferencing relates with their reading comprehension seems necessary. Using both quantitative and qualitative analyses, this study aims to compare L2 readers of three distinct proficiency levels in terms of the success of their lexical inferences and the use of knowledge sources.

This study contributes to an understanding of the role played by lexical inferencing in L2 reading comprehension, through an examination of how it is associated with the learners' reading comprehension. While a number of studies related to the present research have been undertaken in the past (see Bengueleil & Parihakht, 2004; Hu & Nassaji, 2014; Nassaji, 2003), the focus of this earlier work was based predominantly on think-aloud methods. The present study differs from these earlier studies to the extent that it provides more comprehensive evidence covering both qualitative and quantitative data. The results of this study may therefore be of benefit in second language

instruction if they convince instructors of the importance of teaching lexical inferencing strategy in their L2 reading instruction.

1.3. Research Questions

The research questions that guide the current study are as follows:

1. How does the way Korean EFL learners deal with an unknown word vary according to the different proficiency levels?
2. How do the knowledge sources that Korean EFL learners use vary according to the different proficiency levels?
3. Is there a relationship between Korean EFL learners' lexical inferencing success and their reading comprehension? If so, what are the patterns of use of knowledge sources in lexical inferencing by EFL learners at different levels of reading proficiency?

1.4. Organization of the Thesis

The present thesis consists of five themed chapters. This chapter explicates the background of the study that motivated the research and presents the specific research questions it aims to address. Chapter 2 reviews extant literature that motivates the research questions in this thesis. It also reviews some major findings from empirical research studies concerning lexical inferencing in L2. Gaps in previous research are subsequently identified and the research questions are stated. Chapter 3 describes the method of the research regarding the participants and the research instruments. The procedures followed in collecting and analyzing data are stated. Key findings from an analysis of the data are presented in Chapter 4. It also includes a detailed interpretation of the findings of the study, with reference to each of the research questions and in relation to previous relevant research findings. Chapter 5 summarizes the study findings, focuses on both pedagogical and research implications of the study, and indicates its limitations.

CHAPTER 2.

LITERATURE REVIEW

This chapter reviews the literature associated with the main areas of interest in this study. Section 2.1 identifies the literature that explains the lexical inferencing and its role in language learning. Section 2.2 presents several categorization systems of knowledge sources used in lexical inferencing and the major contributors to its development, followed by a theoretical framework adopted in this study. In Section 2.3, the factors that affect lexical inferencing are discussed. Empirical studies on the relationship between lexical inferencing and reading proficiency are considered in Section 2.4.

2.1. Lexical Inferencing

It is well established from a variety of studies that vocabulary plays a vital role in addressing the issue of language comprehension. In second language development, learners are exposed to new language forms mostly through written texts, and thus, reading becomes a major written

language context to develop their vocabulary knowledge (Nation & Coady, 1988).

Several studies indicated that L2 readers avoid generating the meanings of unknown words while reading; rather, the vast majority of these words are ignored (e.g., Bensoussan & Laufer, 1984; Paribakht & Wesche, 1997, 1999). It was found that L2 readers tend to focus on the words they already know or the ones that are perceived to be important for understanding the text. In case the readers attempt to identify the meanings of unfamiliar words, they may consult a dictionary or appeal to another (Fraser, 1999). However, these resources are not likely to be readily available for most of the reading contexts. Thus, lexical inferencing turns out to be the only means of identifying the meanings of unknown words. When L2 learners encounter an unfamiliar word in reading context, they make inferences about their intended meanings in an attempt to reach the accurate interpretation of the text. They involve in lexical inferencing process to compensate for their vocabulary knowledge gaps in their reading. They not only search for useful linguistic and non-linguistic cues from the unknown word and its surrounding text but also use their previous knowledge to identify the most appropriate meaning of the word (Deschambault, 2012; Fraser, 1999; Laufer, 1997; Paribakht & Wesche, 1999; Qian, 2004).

In the early to mid-1980s, there has been an increasing amount of literature on word-guessing by L2 learners. In Liu and Nation's (1985) research, learners showed greater success in word guessing with plenty of understandable surrounding context. In a similar vein, Li (1988) reported that texts with cue-adequate sentences minimized errors in learners' word inference, which further supported Carton's (1971) finding in his work that showed the positive effect of contextual cues on learners' lexical inferencing.

Since the early 1970s, many authors have continued to emphasize the value of lexical inferencing in the success of reading (e.g., Bright & McGregor, 1970; Clarke & Nation, 1980; Grellet, 1998; Widdowson, 1978). They agree that inferring the meaning of unknown words is one of the various reading skills that expert readers have. In addition, it is required for language teachers to guide learners to develop the ability of deriving the word meanings from the very beginning, and not to tell them the meanings of unknown words. As Widdowson (1978: 86) points out: "If the learner is to acquire the communicative ability of reading then he must develop an interpreting strategy whereby he is able to derive meanings from context."

Lexical inferencing is also perceived essential for incidental vocabulary learning (Paribakht & Wesche, 1999). As Carton (1971)

points out, lexical inferencing is a process of both identifying the word meanings and acquiring new lexical items by actively exploiting the contexts that are familiar to readers. Indeed, in reading natural texts, L2 readers' attention to an unfamiliar word form and their effort to comprehend its meaning may lead to the retention of new word knowledge and L2 vocabulary development. Compared to the processing of words without relevant contextual information, the more elaborate process of lexical inferencing in context creates semantic associations between the context and a reader's knowledge and facilitates word learning and retention.

2.2. Knowledge Sources in Lexical Inferencing

Starting from Carton's (1971) development of three categories of cues (i.e., interlingual, intralingual and extralingual cues), categorization systems and descriptions of knowledge sources used in lexical inferencing emerged in an increasing amount of literature on L2 lexical inferencing research (e.g., Bengeleil & Paribakht, 2004; Carton, 1971; Fraser, 1999; Haastруп, 1991; Hu & Nassaji, 2014; Lee & Lee, 2012; Morrison, 1996; Nassaji, 2003, 2006; Paribakht & Wesche, 1999; Qian,

2004; Riazi & Babaei, 2008; Wesche & Paribakht, 2010). During the past 40 years, most of these studies have developed descriptive taxonomies of the way L2 learners process unknown lexical items with the information obtained from think-aloud method in terms of knowledge sources and strategies.

According to a definition provided by Nassaji (2003: 655), knowledge sources refer to “instances when the learner made an explicit reference to a particular source of knowledge, such as grammatical, morphological, discourse, world, or L1 knowledge.” In his research, he identified five types of knowledge sources used in all the introspective think-aloud protocols: grammatical knowledge, morphological knowledge, knowledge of L1, world knowledge, and discourse knowledge.

The current study will use the theoretical framework suggested by Bengeleil and Paribakht (2004), whose findings offer probably the most comprehensive empirical analysis of L2 learners’ lexical inferencing tactics (refer to Table 2.1 for more detailed information).

TABLE 2.1
Bengeleil and Paribakht's Taxonomy of
Knowledge Source Use in L2 Lexical Inferencing

<ul style="list-style-type: none"> I. Linguistic sources <ul style="list-style-type: none"> A. Intralingual sources <ul style="list-style-type: none"> 1. Target word level <ul style="list-style-type: none"> a. word morphology b. homonymy c. word association 2. Sentence level <ul style="list-style-type: none"> a. sentence meaning b. syntagmatic relations c. paradigmatic relations d. grammar e. punctuation 	<ul style="list-style-type: none"> 3. Discourse level <ul style="list-style-type: none"> a. discourse meaning b. formal schemata B. Interlingual sources <ul style="list-style-type: none"> 1. Lexical knowledge 2. Word collocation II. Non-linguistic sources <ul style="list-style-type: none"> A. Knowledge of topic B. Knowledge of medical terms
---	--

Adapted from Bengeleil and Paribakht (2004, p. 231)

In their description of learners' lexical inferencing tactics, Bengeleil and Paribakht (2004) subcategorized knowledge sources into linguistic and non-linguistic sources. Linguistic sources are further subdivided into intralingual (i.e., L2-based) and interlingual (i.e., L1-based). The intralingual sources are organized according to three major levels of written language forms – word, sentence and discourse. This study did not take the interlingual sources into consideration because the analysis

of the learner data sets did not include any evidence of interlingual linguistic sources.

Intralingual sources, also known as L2-based sources, refer to L2 learners' knowledge of the target language. To derive the meaning of an unknown word, learners depend on the knowledge of the target word itself, within the sentence, or beyond the sentence level. The target-word-level sources include the knowledge of word formation (e.g., grammatical inflections, stems, and affixes), the knowledge of formal similarity (e.g., orthographic or phonetic) between the word and another word, and the semantic network of words.

When learners rely on sentence-level cues in their lexical inference, they use the meaning of the sentence that contains the target word, the syntactic properties of the sentence, the knowledge of rules of punctuation, or the syntagmatic and/or paradigmatic relations. The use of syntagmatic relations involves looking at familiar words that collocate with the target word in the sentence. In contrast, using paradigmatic relations refers to looking for familiar words that can replace the target word.

The discourse-level sources are the cues beyond the sentence boundaries. They include the general meaning of sentences, a paragraph, or the text surrounding the target word and the knowledge of the text

structure, text types and organizational patterns.

Non-linguistic sources, also referred to as world knowledge, simply refer to readers' general knowledge of the content or the topic and other related background knowledge.

2.3. Factors of Success in L2 Lexical Inferencing

A considerable amount of previous literature has highlighted a variety of factors that may predict the success of readers' lexical inferencing. A number of factors that affect lexical inferencing behavior are divided into two categories (i.e., contextual factors and learner factors), and are reviewed below.

2.3.1. Contextual Factors

As for contextual factors, they relate to the characteristics of word and text (e.g., Clarke & Nation, 1980; Hu & Nation, 2000; Lee & Lee, 2012; Liu & Nation, 1985; Paribakht & Wesche, 1999), the presence of contextual cues (e.g., Hamada, 2014; Li, 1988), and the location of contextual cues.

A substantial body of research has revealed that contextual cues are of vital importance in the process and outcome of lexical inferencing in reading. Li (1988) compared the results on the measures of word inference of a group of advanced L2 learners that received cue-adequate sentences with results obtained from a group that received cue-inadequate sentences. The results indicated that the group that received cue-adequate sentences achieved a higher score in a word inference test than their counterpart. It also indicated that the former group reported greater ease in the ratings of degrees of difficulty of lexical inference. Çetinavcı (2014) conducted a study to examine the effect of contextual clues on L2 learners' lexical inferencing ability. The participants were the students attending prep classes at a local university (n=88) whose L1 was Turkish. The subjects were divided into two groups in terms of contextual richness. The findings pointed to an important role of contextual richness in guessing word meaning from context. Those who guessed word meanings from rich context (i.e., the sentences included two or more contextual clues of a word) outperformed than those who inferred word meanings from poor context (i.e., the sentences included one contextual clue of a word). In Hamada's (2014) recent study, the degree of attention to contextual clues were found to be dependent upon a reader's proficiency level. The findings indicated that less proficient

readers tended to rely more on morphological information than on contextual information in lexical inference, compared to expert readers.

Other studies have shown that, although contextual clues of an unfamiliar word do sometimes guide readers into identifying the word meanings, the context itself does not always lead readers to an accurate interpretation of the meanings (e.g., Beck, McKeown, & McCaslin, 1983; Bensoussan & Laufer, 1984; Dubin & Olshtain, 1993; Frantzen, 2003; Laufer, 1997). In their earlier study in lexical inference, Beck et al. (1983) proposed four categories of contextual clues along the continuum according to the degree of their effect on word guessing in reading: mis-directive, non-directive, general directive, and directive. Likewise, Laufer (1997) also suggested five types of clues that may interfere with the learners' guessing attempts. Her description of five categories of clues, along with a definition, is summarized in Table 2.2.

TABLE 2.2
Laufer's Categorization of Contextual Clues
that a Reader cannot Guess

Types of Contextual Clues	Definition
Nonexistent contextual clues	The clues are not there to be exploited.
Unusable contextual clues	The clues are in words that are themselves unfamiliar to the reader.
Misleading clues	The clues provide a false connotation for the word.
Partial clues	The clues help the reader to arrive at a general word meaning.
Suppressed clues	The clues are overridden by the reader's background knowledge.

Adapted from Laufer (1997, pp. 28-30)

Frantzen (2003: 184) concluded that, in these cases, “it[=the context] is either vague, ambiguous, or misleading. Contexts can dissuade students away from the correct meanings and persuade them to infer incorrect meanings.” Similarly, Bensoussan and Laufer (1984) reported that in a reading passage of which the content was familiar to all students, to a certain extent, 29 words out of 70 words had no contextual clues and that only about 19 percent of words was examined to have clear contextual clues.

Other researchers focused on the characteristics of words for

identifying the factors of successful vocabulary learning (e.g., Liu & Nation, 1985; Paribakht & Wesche, 1997, 1999). In terms of word features, several studies found that words with clear referents such as nouns and verbs are easier to learn than other word classes (e.g., Paribakht & Wesche, 1997, 1999). Furthermore, verbs were examined to be the easiest to infer, next nouns, followed by adverbs and finally adjectives in Liu and Nation's (1985) study.

Some researchers believe that the density of new words has great influence on lexical inference (e.g., Chegeni & Tabatabaei, 2014; Hu & Nation, 2000; Liu & Nation, 1985; Wesche & Paribakht, 2010). For instance, a study carried out by Liu and Nation (1985) attempted to investigate the factors that have impact on word guessing in context. The participants were 59 teachers of English with varying proficiency levels. The findings indicated that the density of unknown words in reading passages had strong impact on the readers' lexical inference. Specifically, the overall scores on the reading tasks revealed a clear superiority of the passage with low density of new words over the one with high density of new words. A further comparative study was carried out by Hu and Nation (2000) to examine the effect of the density of unknown words on text comprehension. The data obtained from sixty-six learners of English from a variety of L1 backgrounds revealed a predictable relationship

between the density of new words and the degree of reading comprehension.

2.3.2. Learner Factors

Learner factors are concerned with a learner's linguistic knowledge (e.g., Chen, 2018; Hamada, 2014; Hatami & Tavakoli, 2012; Kaivanpanah & Alavi, 2008; Kim, 2010; Nassaji, 2006; Zhang & Koda, 2012), linguistic proficiency (e.g., Bengeleil & Parihakht, 2004; Kaivanpanah & Moghaddam, 2012; Kim, 2010; Lee & Lee, 2012; Parel, 2004; Riazi & Babaei, 2008), background knowledge and familiarity with the content (e.g., Hwang, 2012; Kaivanpanah & Rahimi, 2017; Kim, 2010; Pulido, 2007), first language (e.g., Wesche & Paribakht, 2010), and other personal characteristics such as perceptual learning style, memory capacity, and motivation (e.g., Cain et al., 2004; Shen, 2010).

A series of empirical studies have found a positive relationship between readers' morphological knowledge and/or awareness and their use of lexical inferencing strategy. Those studies have reported that learners' morphological knowledge enables them to recognize the

morphological structures of unfamiliar words and to segment them into their morphemic parts (e.g., Chen, 2018; Hamada, 2014; Zhang & Koda, 2012). For example, in Chen's (2018) recent study, more proficient readers with greater morphological awareness appeared to be more capable of lexical inferencing than less proficient readers.

Learners' L2 vocabulary knowledge appears to be one of the most decisive factors that affect their lexical inferencing and reading comprehension (e.g., Hatami & Tavakoli, 2012; Nassaji, 2006). When learners encounter unfamiliar words, it is difficult for them to make use of contextual clues if the clues themselves are unknown to the learners. Referring back to Laufer's (1997) explanation, these "unusable contextual clues" make a reader unable to generate the meaning of a target word. For instance, a study conducted by Nassaji (2006) revealed that readers with stronger depth of vocabulary knowledge not only made more effective use of lexical inferencing strategies but also made correct identification of word meanings compared to their weaker counterparts. In the same vein, both vocabulary breadth and depth were found to be related to success in lexical inferencing and their perceived L2 ease of inferencing in Hatami & Tavakoli's (2012) later study. Interestingly, they reported that vocabulary breadth played a more contributing role in lexical inferencing success than vocabulary depth did.

Learners' background knowledge, which relates to their familiarity with the topic, has been reported influential in lexical inferencing while reading (e.g., Kaivanpanah & Rahimi, 2017; Kim, 2010; Pulido, 2007). Readers employ their background knowledge in their attempt to infer the meaning of unfamiliar words (Paribakht & Wesche, 1999), and readers more familiar with the topic were prone to make richer textual interpretations. Specifically, the responses to a questionnaire about topic familiarity revealed that learners made more correct guesses on word meanings when they read a more familiar text compared to a less familiar text (Pulido, 2007). Likewise, readers informed of the background knowledge of the topic outperformed in lexical inferencing than the others who were not informed, regardless of their L2 proficiency (Hwang, 2012), which demonstrated that readers' prior knowledge is a significant factor in the success of lexical inferencing.

Another line of evidence addressing that L2 proficiency plays a key role in lexical inferencing is also widely documented (e.g., Fraser, 1999; Hu & Nassaji, 2014; Lee & Lee, 2012; Nassaji, 2006). The results suggest that L2 learners have to reach a threshold level of L2 proficiency in order to arrive at appropriate meanings of unfamiliar words in reading texts. In other words, the more advanced a reader is, the more effective and successful the lexical inferencing is, because the expert learners

know more words that they can make use of in guessing the meanings of unknown words. It should be pointed out that, while measures of L2 vocabulary knowledge has been regarded as the most decisive factor in L2 proficiency in an increasing number of studies (Wesche & Paribahkt, 2010), the measures of L2 proficiency in these studies still vary.

2.4. Lexical Inferencing and L2 Reading Proficiency

It is now well documented that readers' ability to guess the meaning of unknown words is demonstrably related to their language proficiency. The trilingual study of lexical inferencing (Wesche & Paribakht, 2010) revealed that advanced L2 readers are likely to be less successful in lexical inferencing than native speakers. There is uncertainty, however, whether there is a strong relationship between L2 reading performance and lexical inferencing.

Previous research findings into the relationship between learners' L2 reading proficiency and word guessing have been inconsistent and contradictory. In their study, Bensoussan and Laufer (1984) found that most of the lexical inferences that L2 learners made were unsuccessful,

which led to their miscomprehension of the text. As for student level, they reported that the proficiency did not have an effect on the learners' inferencing success. Most of the learners, regardless of their proficiency, were found to ignore the unknown words or to use preconceived notions, most of which did not make any sense in the given context. Similarly, the participants' L2 reading performance showed no substantial impact on their lexical inferencing behavior (e.g., the number of correct inferences, the kinds of knowledge sources used, etc.) in Bengueleil and Paribakht's (2004) research. Riazi and Babaei (2008) also reported that learners' lexical inference did not show any relationship with their reading ability. Kim (2010) argued that L2 reading ability did not have a profound impact on the participant's lexical inferencing process during their reading tasks.

Conversely, learners' poor reading comprehension was found to be the plausible result of their unsuccessful lexical inferences in Cain and Oakhill's (1999) study. Consistent with their previous work, a significant relationship between reading comprehension skills and lexical inference was found in Cain et al.'s (2004) findings. The less skilled readers tended to fail to infer the meanings of unfamiliar words than the skilled readers did. This finding is also supported by Kaivanpanah and Moghaddam (2012) who reported that differences in L2 reading

performance have a significant effect on readers' lexical inferencing success. In their study, more proficient readers tended to make either more correct or partially correct guesses on word meanings than less proficient readers, although their use of knowledge sources did not vary according to their reading abilities. In their study, Lee and Lee (2012) found that advanced readers showed more active and successful use of lexical inferencing strategies, using contextual and other clues to guess the meanings of unknown words, while less skilled readers revealed heavy reliance on their background knowledge in their lexical inferencing process.

This chapter has reviewed literature concerned with four areas of critical importance in the present research. Firstly, the literature that addressed lexical inferencing, with a particular focus on its definition and its role in vocabulary acquisition through reading was described. The knowledge sources used in lexical inferencing were identified (for example, Nassaji, 2003; Bengueleil and Paribakht, 2004). A consideration of various factors that have influence on the success of lexical inferencing then followed. Empirical studies that explored the relationship between lexical inferencing behavior and reading performance were reviewed.

Lexical inferencing has enjoyed growing interest among vocabulary

learning researchers in recent years. Factors such as contextual clues, language proficiency, individual learning styles and characteristics of word have been found to play a role in determining the success of word guessing. Empirical evidence has also reported that there is a positive relationship between lexical inferencing ability and L2 reading proficiency.

This study uses a mixed methods approach to make comparisons across different reading proficiency levels regarding lexical inferencing and to gain insights into qualitative variations among the groups. Three key research questions as mentioned earlier are thus raised to explore the relationship between learners' lexical inferencing and their reading proficiency.

CHAPTER 3.

METHODOLOGY

This chapter provides the methodological approach and research design for the current study. Section 3.1 introduces a pilot study conducted prior to the experiment. Section 3.2 explains the main study with a detailed description on the participants and the instruments employed in the study. Section 3.3 provides the data collection procedure and in Section 3.4, the data analysis procedure is explained.

3.1. Pilot Studies

Prior to the main experiment, a pilot study was conducted to examine the method's validity. To ensure the pilot sample's similarity to the main study's sample, non-participant 8th graders in the same school were sampled for the pilot study, and three tests were administered.

First, a Vocabulary Levels Test (Webb, Sasa & Ballance, 2017) was conducted to measure the learners' average level of English vocabulary knowledge. The test consists of five levels of vocabulary knowledge from the 1000 to 5000 levels. The result of the test was used to select the appropriate level of reading materials for a lexical inferencing task.

The second pilot study was conducted to determine whether a reading-test level was appropriate for dividing learners into three distinct levels. Results of the 9th-grade reading-proficiency test (20 questions) showed that the gap between advanced and intermediate groups was much smaller than between intermediate and basic groups. Consequently, the 10th-grade reading proficiency test was used as an experimental tool in this research.

For the selection of target words, the students were given two reading passages to read and were asked to circle any unknown words. A list of the target words was then presented to the group, who were asked to provide the words' meanings in Korean. Finally, 23 words that were found to be unfamiliar to the majority of the group were selected and used as target words.

3.2. The Main Study

Based on pilot study results, the main study was conducted in mid-September, 2019. To explore how learners usually approach and guess unknown words' meanings, a questionnaire was distributed to 97 eighth-grade Korean students. In addition, a reading comprehension test was administered in order to measure their reading proficiency. Then, a

lexical inferencing task, designed by the researcher, was employed to investigate learners' use of lexical inferencing strategies in reading. To explore learners' actual performance of lexical inferencing in reading, six students were recruited for individual think-aloud sessions. Finally, correlation analysis was conducted to identify significant associations in collected data.

3.2.1. Participants

After permission was obtained from the principal of the school, where the researcher works as an English teacher, student participants were recruited. Participants in the experiment numbered 97 (56 male, 41 female) eighth-grade students from Seoul, South Korea. Notably, this school has a high proportion of students with excellent academic achievement scores, and it ranks among the top 30 middle schools in Seoul. Participants spent 3 hours a week in English class. Of the volunteers, five individuals who were rated deficient in major subjects were excluded from the data analysis.

Participants were divided into three levels based on their reading comprehension test scores: below 40 = basic ($n=29$); 45-70 = intermediate ($n=33$); and 75-100 = advanced ($n=35$) (Table 3.1).

TABLE 3.1

Information of Participants in Different Proficiency Levels

Proficiency	Reading Score	Number of the Subjects
Basic	0-40	29
Intermediate	45-70	33
Advanced	75-100	35

Additionally, 37 out of the 97 participants volunteered to participate in researcher-conducted think-aloud sessions in which their inferencing behaviors would be recorded. From these 37, six students, two from each of the three proficiency levels, were selected according to gender ratio and reading comprehension scores. More specifically, two who scored the most and two who scored the least were chosen for the advanced and basic groups, respectively. Two who scored close to these volunteers' average scores were chosen from the intermediate group. Overall, a small sample was chosen because of the expected difficulty in obtaining think-aloud data.

3.2.2. Instruments

This study employed three instruments: (1) a questionnaire on lexical inferencing, (2) a comprehension test to measure learners' reading proficiency, and (3) a task to examine learners' lexical inferencing.

3.2.2.1. Questionnaire

This research adapted Qian's (2004) questionnaire, which consists of two sections of general questions for structured responses. Using statements based on previous research findings (Han, 2014; Jeon, 2007; Kim & Cha, 2008; Park, 2019), the first section examines what readers do when they encounter unknown words, including frequently reported behaviors such as using a bilingual dictionary, asking a teacher for help, and guessing from context. The second section explores information sources that learners use to guess an unfamiliar word's meaning. With reference to Nassaji's (2003) findings, statements in this section include such knowledge sources as background knowledge, morphological knowledge, and discourse meaning. Study participants ranked all survey questions on a 5-point Likert scale according to the strength of their agreement: *strongly agree*, *agree*, *neutral*, *disagree*, and *strongly disagree* (see Appendix 1 for the complete questionnaire).

3.2.2.2. Reading Comprehension Test

A reading section of an English mock CSAT for tenth graders was utilized to assess learners' reading proficiency. Administered by Seoul Metropolitan Office of Education in March, 2018, this test is considered the high-stakes national examination that measures Korean EFL learners' English proficiency. In general, all 45 items (17 listening, 28 reading) on the English CSATs have a multiple-choice format, with a score of either 2 or 3 points per item. The test administration time is the same as the actual SAT, 70 minutes. Reading comprehension items cover six components: (1) reading for gist, (2) reading for details, (3) logical understanding, (4) contextual understanding, (5) indirect writing, and (6) grammar and vocabulary (KICE, 2019).

For the current study, 20 CSAT reading comprehension items were selected. The test's reliability was as high as .89, and item facility (.65) and discrimination (.42) were within the desirable range (Park, 2018). Of the 28 reading items on the test's original version, the researcher selected two or three reading questions for each component and excluded the items judged too low in discrimination and facility. Examinees had 40 minutes to complete the test. Each reading passage's length ranged from 100 to 218 words and was followed by one question, except for the last

passage about which two questions were asked.

3.2.2.3. Lexical Inferencing Task

Reading materials for a lexical inferencing task were selected from Nation's (2018) vocabulary textbook. Each passage's target words were chosen from word frequency lists of the British National Corpus (BNC) and the Corpus of Contemporary American English (COCA). In the six-level series, the researcher chose two reading passages from Level 5, with the major word level ranging from the third to the fourth 1000 words, which corresponds to level B2 of the Common European Framework of Reference for Languages (CEFR) levels. The book's selection was based on the study participants' average vocabulary size—about the third 1000 words.

The two reading passages were carefully chosen to have an appropriate level of authenticity, linguistic difficulty, and length. The two passages' lengths were 293 and 320 words, respectively (TABLE 3.2).

TABLE 3.2
The List of Target Words from Two Target Reading Passages

Title	Dian & Digit	Thucydides and the Plague of Athens
The Number of Running Words	320	293
The Number of Target Words	12	11
List of Target Words	accustom, arouse, clash, classification, cling, compliance, congregate, custody, disperse, embody, flock, graze	avail, dread, fundamental, incredulous, linger, plague, presently, scribble, shrine, solitude, summon

Text coverage (i.e., the percentage of running words known in the text by readers) for adequate textual comprehension is assumed to be from 95 to 99% (Hu & Nation, 2000; Waring, 2003). Then, to ensure each passage’s appropriate rate, the texts were carefully screened. First, except for target words, some words were replaced by easier synonyms or phrases that did not exceed the two 1000 words level. For example, the words *comprehend*, *population*, and *expand* were respectively replaced by *understand*, *number of people*, and *increase*. Next, as exemplified below, linguistically complex sentences were appropriately modified so eighth graders could understand them. In each passage, the

ratio of unknown words to total words was below 4% (see Appendix 2).

Example 1:

Fossey's favorite was a baby named Digit whom she nursed in 1967 when he injured his hand. (original)

Fossey's favorite was a baby named Digit. She took care of him when he hurt his hand in 1967. (modified)

Immediately preceding the lexical inferencing task, participants received a list of 23 target words and, to test their vocabulary knowledge, were asked to write L2 Korean translations or synonyms for each word within 5 minutes. Next, participants received two target texts, along with a supplementary sheet. Given 20–25 minutes per text, they were asked to read for general understanding, to guess the underlined target words' meanings, and to note them in Korean on the supplementary sheet.

3.3. Procedure

In this research, over a week's time, data were collected once every two days. Table 3.3 displays a summary and timeline of the study's design.

TABLE 3.3
A Summary and Time Line of the Research Design

Sessions	Procedures	Time Length
1	Questionnaire	5 minutes
	Reading Proficiency Test	40 minutes
2	Target Word Knowledge Test	5 minutes
	Lexical Inferencing Task (Text 1)	25 minutes
	Lexical Inferencing Task (Text 2)	25 minutes
3	Individual Think-aloud Session (selected students only)	30 minutes

First, participants responded to a questionnaire on the use of lexical inferencing strategies. After completing the questionnaire, they took a 40-minute English reading-proficiency test. Based on the results, six volunteers were selected and subsequently contacted by the researcher to arrange think-aloud protocols.

In the subsequent session, most participants took 40 to 50 minutes to

complete the paper-based lexical inferencing task. Those six scheduled for a think-aloud protocol did not perform the paper-based task but had individual, prearranged sessions with the researcher, who recorded their inferencing behaviors. Immediately before the session, each participant received a list of 23 target words, wrote their L1 meanings, and, while reading, were asked to verbalize their specific thoughts while attempting to guess the underlined target words' meanings. The researcher informed individuals that they could not ask any questions and tried not to intervene while students verbalized the process. No specific time limit was imposed, but each session could last up to 30 minutes. The researcher later transcribed each entire audio-recorded session.

3.4. Data Analysis

This section details scoring procedures and data analyses.

Data obtained from the questionnaire were examined quantitatively across the three proficiency levels, and all options' frequency rankings were computed. One-way ANOVA was performed to assess statistical differences among groups. Too, data from the lexical inferencing task were analyzed quantitatively, and think-aloud data were analyzed both

quantitatively and qualitatively. The initial data set contained 2,231 responses of interest, but target words that a participant indicated knowing were omitted during analysis, so the final data set contained 2,150 responses.

To score learners' success in guessing meanings after careful examination of part of the data, the researcher and an experienced Korean teacher of English developed a detailed rubric for each target word. Based on a scoring rubric set, the researcher and the colleague independently scored learners' responses according to Nassaji's (2003) 3-point scale. Responses semantically, syntactically, and contextually appropriate were considered successful and given two points. Partially successful inferencing was defined as responses that made sense only in the context and given one point. Responses that did not make sense in the context were considered unsuccessful and given a zero (Example 2). Cohen's kappa for inter-rater agreement was 0.87, and discrepancies were resolved through discussion.

Example 2: *She tried to watch them when they would congregate, but they dispersed when they saw her.*

For instance, responses *huthecita*, *tomangkata*, and *palapota* to the target word *disperse* were given two, one, and no points, respectively.

Since the number of words included in analysis differed for each student, individual scores were converted to a perfect score of 100. Then, correlation analysis was conducted on the obtained data.

Think-aloud data were also examined qualitatively to determine learners' knowledge types used for lexical inferencing. For coding categories, the taxonomy of knowledge sources in L2 lexical inferencing by Bengelil and Paribakht (2004) was used. Intralingual knowledge sources from learner data were classified into three levels: target word, sentence, and discourse level and, subsequently, divided into subcategories.

CHAPTER 4.

RESULTS AND DISCUSSION

A detailed analysis of research data is presented in this chapter, with reference to each of the research questions. Section 4.1 and 4.2 examine the results from the data collected by means of a questionnaire. The former section describes L2 learners' behaviors in dealing with an unknown word. The following section illustrates L2 learners' preferred knowledge sources in lexical inferencing. Section 4.3 discusses the relationship between lexical inferencing and L2 reading proficiency. Section 4.4 provides a qualitative analysis of the learners' think-aloud data.

4.1. L2 Learners' Behaviors in Dealing with an Unknown Word

The first research question investigated learners' self-reported behaviors in dealing with unfamiliar words, more specifically whether learners' perceived behaviors differed according to their L2 reading proficiency. Table 4.1 illustrates responses by proficiency level, with the frequency of each respondent's behavior calculated by percentage.

Table 4.1
Frequency of the Way Learners Deal with Unknown Words

Behavior	Level	Number (%) of respondents					Mean
		Never	Rarely	Sometimes	Often	Always	
Look up the word in a bilingual dictionary	B	3 (10.34)	3 (10.34)	8 (27.59)	5 (17.24)	10 (34.48)	3.55
	I	2 (6.06)	1 (3.03)	3 (9.09)	11 (33.33)	16 (48.48)	4.15
	A	6 (17.14)	2 (5.71)	5 (14.29)	12 (34.29)	10 (28.57)	3.51
Look up the word in an English-only dictionary	B	9 (31.03)	9 (31.03)	9 (31.03)	2 (6.90)	0 (0)	2.14
	I	11 (33.33)	6 (18.18)	8 (24.24)	7 (21.21)	1 (3.03)	2.42
	A	6 (17.14)	8 (22.86)	3 (8.57)	9 (25.71)	9 (25.71)	3.20
Guess its meaning from the context	B	0 (0)	3 (10.34)	6 (20.69)	15 (51.72)	5 (17.24)	3.76
	I	1 (3.03)	0 (0)	3 (9.09)	15 (45.45)	14 (42.42)	4.24
	A	1 (2.86)	0 (0)	7 (20.00)	6 (17.14)	21 (60.00)	4.31
Ask the teacher	B	4 (13.79)	3 (10.34)	11 (37.93)	8 (27.59)	3 (10.34)	3.10
	I	3 (9.09)	7 (21.21)	7 (21.21)	9 (27.27)	7 (21.21)	3.30
	A	7 (20.00)	7 (20.00)	13 (37.14)	6 (17.14)	2 (5.71)	2.69
Ask a friend	B	1 (3.45)	4 (13.79)	3 (10.34)	10 (34.48)	11 (37.93)	3.90
	I	1 (3.03)	2 (6.06)	6 (18.18)	11 (33.33)	13 (39.39)	3.90
	A	5 (14.29)	6 (17.14)	9 (25.71)	9 (25.71)	6 (17.14)	3.14
Look for clues to meaning in the word itself	B	4 (13.79)	5 (17.24)	8 (27.59)	10 (34.48)	2 (6.90)	3.03
	I	2 (6.06)	4 (12.12)	7 (21.21)	11 (33.33)	9 (27.27)	3.64
	A	3 (8.57)	3 (8.57)	5 (14.29)	14 (40.00)	10 (28.57)	3.71

Make a note of the word	B	8 (27.59)	9 (31.03)	7 (24.14)	5 (17.24)	0 (0)	2.31
	I	11 (33.33)	6 (18.18)	10 (30.30)	5 (15.15)	1 (3.03)	2.36
	A	10 (28.57)	7 (20.00)	10 (28.57)	3 (8.57)	5 (14.29)	2.60

Note: A=advanced group, I=intermediate group, B=basic group

Guessing meaning from context was perceived as the most frequent behavior by both intermediate (mean=4.24) and advanced (mean=4.31) groups. Next, consulting a bilingual dictionary was a frequently preferred behavior in all three groups, with mean scores higher than 3.50. In comparison, asking a friend was reported the most popular practice in the basic group (mean=3.90). These findings confirm previous studies (e.g., Fan, 2003; Gu & Johnson, 1996; Harley & Hart, 2000; Park, 2019, Qian, 2004) that found L2 learners are most likely to infer the meaning of an unknown word and/or use a bilingual dictionary when reading.

Noteworthy is that the advanced group's mean score was the highest in all but three areas: consult a bilingual dictionary, ask the teacher for assistance, and ask a friend. In particular, the three groups showed marked differences in the frequency of asking a friend, $F(2, 94)=5.23$, $p<.01$. Post hoc analysis revealed that both the basic ($t(62)=2.40$, $p<.01$) and intermediate groups ($t(66)=2.96$, $p<.01$) differed significantly from the advanced group.

Importantly, however, the present study and previous studies have

shown inconsistent results in the frequency of using social strategies. While several studies (e.g., Jeon, 2007; Kim & Cha, 2008; Qian, 2004) have evidenced that asking a friend or a teacher for help was not a favored strategy for advanced learners compared to less competent learners, some other studies (e.g., Harley & Hart, 2000; Park, 2019) have observed that social strategies were preferred regardless of L2 proficiency. This inconsistency might stem from participants' differing demographic and cultural backgrounds. For instance, Kim and Cha (2008) found that Korean middle school students used social strategies less than other vocabulary strategies, but Park (2019) found that Korean elementary students enjoyed using social strategies. In a similar vein, Harley and Hart's (2000) participants who reported using social strategies were English-speakers.

Furthermore, advanced learners were more likely than lower level learners to use monolingual dictionaries. Half the advanced group reported that they *often* or *always* looked up the word in an English-only dictionary, while the majority of basic and intermediate groups reported that they *rarely* or *never* did, with the difference being very statistically significant, $F(2, 94)=6.15, p<.01$. More specifically, the statistical difference between basic and advanced groups was highly significant, $t(62)=3.31, p<.001$, thus also confirming other studies (e.g., Harley &

Hart, 2000).

Interestingly, compared with basic and intermediate learners, advanced learners seemed to emphasize more the use of the lexical inferencing strategy, a finding that also follows several previous studies (e.g., Harley & Hart, 2000; Jeon, 2007). The three groups showed statistically significant differences in guessing words' meaning from the context, $F(2, 94)=3.34, p<.05$. Both basic ($t(62)=2.35, p<.05$) and intermediate groups ($t(60)=2.19, p<.05$) differed significantly from the advanced group, thus implying that proficient learners consciously attempt to use several clues to infer an unknown word's meaning and/or even take notes to remember its meaning.

4.2. L2 Learners' Preferred Knowledge Sources in Lexical Inferencing

The second research question considered whether learners' preferred knowledge sources differed according to the three proficiency levels, as summarized in Table 4.2.

Table 4.2
Frequency of Learners' Preferred Knowledge Sources

Knowledge Source	Level	Number (%) of respondents					Mean
		Never	Rarely	Some-times	Often	Always	
Word class	B	0 (0)	6 (20.69)	10 (34.48)	9 (31.03)	4 (13.79)	3.38
	I	2 (6.06)	2 (6.06)	9 (27.27)	16 (48.48)	4 (12.12)	3.54
	A	3 (8.57)	4 (11.43)	10 (28.57)	14 (40.00)	4 (11.43)	3.34
Syntagmatic relations	B	0 (0)	4 (13.79)	10 (34.48)	14 (48.28)	1 (3.45)	3.41
	I	1 (3.03)	0 (0)	12 (36.36)	14 (42.42)	6 (18.18)	3.73
	A	1 (2.86)	3 (8.57)	7 (20.00)	11 (31.43)	13 (37.14)	3.91
Knowledge of the topic	B	0 (0)	1 (3.45)	10 (34.48)	12 (41.38)	6 (20.69)	3.79
	I	0 (0)	0 (0)	9 (27.27)	14 (42.42)	10 (30.30)	4.03
	A	1 (2.86)	1 (2.86)	8 (22.86)	12 (34.29)	13 (37.14)	4.00
Grammar	B	0 (0)	3 (10.34)	9 (31.03)	12 (41.38)	5 (17.24)	3.66
	I	1 (3.03)	1 (3.03)	7 (21.21)	16 (48.48)	8 (24.24)	3.88
	A	3 (8.57)	4 (11.43)	12 (34.29)	11 (31.43)	5 (14.29)	3.31
Word morphology	B	0 (0)	3 (10.34)	11 (37.93)	11 (37.93)	4 (13.79)	3.66
	I	2 (6.06)	5 (15.15)	8 (24.24)	11 (33.33)	7 (21.21)	3.48
	A	1 (2.86)	3 (8.57)	11 (31.43)	12 (34.29)	8 (22.86)	3.65
Discourse meaning	B	0 (0)	5 (17.24)	8 (27.59)	12 (41.38)	4 (13.79)	3.51
	I	0 (0)	2 (6.06)	10 (30.30)	13 (39.39)	8 (24.24)	3.82
	A	1 (2.86)	0 (0)	3 (8.57)	15 (42.86)	16 (45.71)	4.29

Note: A=advanced group, I=intermediate group, B=basic group

Data clearly indicates that *knowledge of the topic* is one of the most popular knowledge sources as perceived by learners at all proficiency levels. This result accords with earlier observations (e.g., Nassaji, 2003; Qian, 2004), which showed that background knowledge was the most frequently used source in L2 learners' actual practices of lexical inferencing.

Table 4.2 reveals that advanced learners mainly employed top-down lexical inferencing strategies. Their preferred knowledge sources' top two categories (i.e., *discourse meaning* and *knowledge of the topic*) are top-down in nature, and their rankings (4.29, 4.00) stand out more saliently than other options. This finding is consistent with that of Qian (2004) who also found that *discourse meaning* and *background knowledge* were the top two options ESL learners perceived as their preferred knowledge sources in lexical inferencing.

Discourse meaning demonstrated a statistically significant difference among proficiency levels, $F(2, 94)=6.04, p<.01$. In particular, both differences between intermediate and advanced groups ($t(66)=2.21, p<.05$) and between basic and advanced groups ($t(62)=3.39, p<.001$) were statistically significant. Approximately 90% of advanced learners responded that they *always* or *often* used the meaning of a paragraph or a text as a whole to infer unknown words' meanings.

4.3. The Relationship between Lexical Inferencing and L2 Reading Proficiency

The research third question sought to determine the importance of lexical inferencing in L2 reading comprehension. Table 4.3 summarizes results for each group’s—basic, intermediate, advanced—lexical inferencing while reading.

Table 4.3
The Descriptive Statistics of the Data of Lexical Inferencing

	N	Mean	SD	SEM	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
B	29	10.1	10.3	1.9	6.4	13.9	0	41.3
I	33	29.9	16.2	2.8	24.4	35.4	0	52.4
A	35	58.6	15.6	2.6	53.5	63.8	31.8	82.4
Total	97	34.3	24.5	2.5	29.5	39.2	0	82.4

Note: The mean scores are out of 100.

This data shows that most lexical inferences were unsuccessful (mean=34.3), following Bensoussan and Laufer (1984), who reported that context did not generally help learners’ lexical guessing. This study’s mean scores show variation among students according to their

proficiency levels. That is, the mean score for the advanced group was the highest (mean=58.6), followed by the intermediate group (mean=29.9) with a mean score about 30 points lower.

Results of each group’s L2 reading proficiency are also summarized in Table 4.4.

Table 4.4
The Descriptive Statistics of the Data of English Reading Proficiency

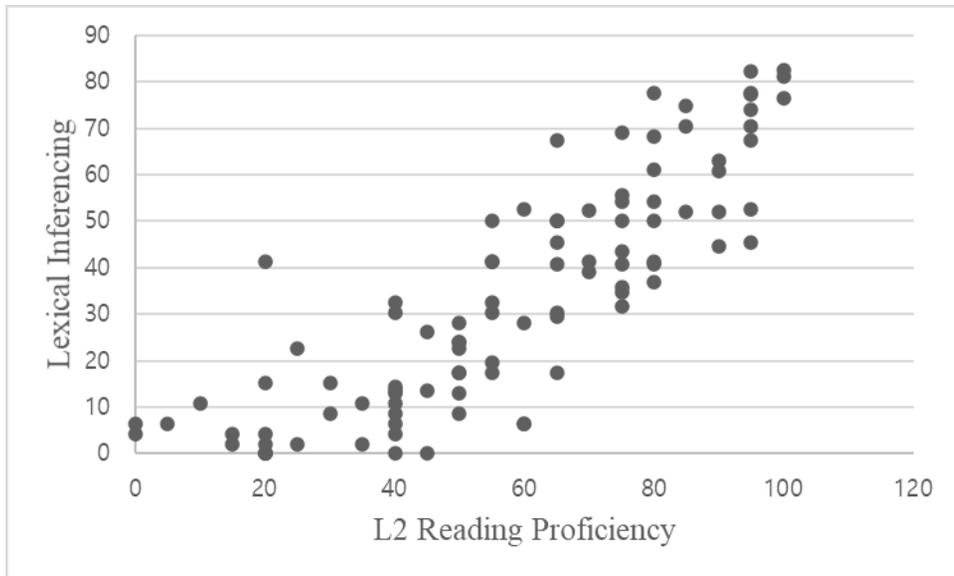
	N	Mean	SD	SEM	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
B	29	26.4	12.9	2.4	21.5	31.3	0	40
I	33	57.3	7.7	1.3	54.6	60	45	70
A	35	85.4	8.9	1.5	82.4	88.4	75	100
Total	97	58.2	25.9	2.6	53	63.4	0	100

Note: The mean scores are out of 100.

As to the role of lexical inferencing in L2 reading proficiency, analysis revealed positive correlation between the two variables, $r(97)=.85$, $p<.001$. A scatterplot summarizes the results (Figure 4.1). Overall, learners’ L2 reading ability and their success in lexical inferencing correlated strongly and positively, that is, increases in reading proficiency correlated with increased success in guessing unknown words’ meanings.

Figure 4.1.

Correlation between L2 Reading Proficiency and Lexical Inference



These results support evidence from previous observations (e.g., Cain et al., 2004; Kaivanpanah & Moghaddam, 2012; Lee & Lee, 2012) that reported more competent L2 learners' tendency to infer new words' meanings more successfully. Compared to more competent readers, less competent L2 readers incorrectly guessed new lexical items' meanings from context, thus indicating that learners' inexact and irrelevant lexical inferences might lead to misunderstanding a text.

Although the current research findings are broadly consistent with earlier studies, they are simultaneously contrary to several previous studies (e.g., Bengelil & Paribakht, 2004; Riazi & Babaei, 2008; Kim,

2010). While these studies found that more proficient readers had a higher percentage of correct lexical inferences than less proficient readers, statistical analysis revealed no significant difference among learners of different L2 proficiency. The discrepancy in statistical results might relate to differences in sample size and reading competence. In Riazi and Babaei's (2008) study, for instance, the sample size was small, and in Bengelil and Paribakht's (2004) research, participants were assigned to only two competency levels (i.e., intermediate and advanced).

4.4. The Patterns of Use of Knowledge Sources in Lexical Inferencing

Besides quantitative information on how lexical inferencing works in reading comprehension, also of great interest is how differently learners use knowledge sources according to their proficiency levels, as the following examples illustrate.

4.4.1. Use of Top-down vs. Bottom-up Processing

Skilled readers were observed to prefer top-down processing and to make more strategic and balanced use of their knowledge of the topic and discourse meaning. While most learners used sentence-level meaning to generate a target word's meaning in general, skilled readers who found inferring difficult turned to alternative knowledge sources to search for other clues from the surrounding context. In contrast, less skilled readers seemed to depend on bottom-up processing, showing heavy reliance on sentence-level cues. They neither made extra effort to consider other linguistic sources nor made certain their guesses were correct. The examples below illustrate use of knowledge sources by L2

readers of differing reading proficiencies to contrast their top-down and bottom-up processing.

Example 1

Target word: *graze*

(1) S1: (*reads aloud: 'gorillas flocked to the hills of the Congo and Rwanda to graze on plants... And then she waited'*) *I guess the only thing that gorillas do with plants is to eat them or something similar. I know that gorillas eat plants, not meat. So, it may mean... that they would go to Congo and Rwanda to find their food... I guess.* (Advanced)

(2) S3: (*reads aloud: '...to graze on plants'*) *I guess it means 'to grow' or 'to plant' because that's what we do with plants.* (Intermediate)

(3) S4: (*reads aloud: '...to graze on plants'*) *I think it means to 'live'... or I don't know... maybe 'to grow'? It says 'on plants' so I think gorillas live on plants.* (intermediate)

(4) S5: (*reads aloud: '...to graze on plants'*) *Well... the word is a verb... and... it says plants... so... I don't know!* (basic)

(5) S6: (*reads aloud: '...to graze on plants'*) *Isn't it a specific name of a plant? Or it has some relationship with plants. It could be fertilizer. I'm not sure.* (basic)

In example 1, above, S1 from the advanced group first used prior knowledge that gorillas eat plants and then verified its meaning against the context, leading to successful lexical inferencing. In contrast, two participants from the intermediate group failed to derive the meaning of *graze*, as shown in excerpts (2) and (3). While S3 attempted to exploit background knowledge at the beginning of lexical inferencing, he did not seem to recognize that the subject was a gorilla, not a human being. Use of sentence-level grammar by S4 in excerpt (3) also turned out to be an inappropriate knowledge source because the target word's meaning was not derivable from the grammatical information of the preposition *on*. This finding seems consistent with that of Nation (2003) who found that grammatical knowledge was less associated with successful inferences than other knowledge sources (e.g., morphological knowledge, background knowledge). This example also reveals that intermediate

level learners exhibit inappropriate use of knowledge sources in their lexical inferencing process. Lastly, the two participants from the basic group spent the least time on the target word, not going beyond the target-word level in excerpts (4) and (5), thus also guessing incorrectly.

In some cases, learners spent more time on inferring a target word's intended meaning than on other items. For instance, learners had to read through a series of sentences to infer the specific meaning of the target-word *plague*. Example 2 shows how each participant from three distinct groups drew a different conclusion about the word's meaning.

Example 2

Target word: *plague*

(6) S1: (*reads aloud: '...the plague of Athens'*) *Hmm... plague...? It's related to the history of Athens. I don't know. Maybe it means 'a period of time' to explain a particular time or happening. (reads aloud: 'In 430 BCE, an army attacked the city of Athens... it moved from person to person')* *The word plague means a kind of a disease. Like the one in this story, a disease that kills many people. (advanced)*

(7) S4: (*reads aloud: ‘...the plague of Athens’*) *Is it a myth or a legend? Like ‘a myth of Greece’ or something like that because it says it’s a historical event. (reads aloud: thousands of people gathered to hide from the army) No, it doesn’t mean a myth. It’s more like a disaster because an army attacked people in Athens. Yes, a disaster. Or... a war?* (intermediate)

(8) S5: (*reads aloud: ‘...the plague of Athens’*) *plague... I think it means a plug? The pronunciation of the plague sounds similar to a plug in Korean.* (basic)

(9) S6: (*reads aloud: ‘...the plague of Athens’*) *It’s like a party because it says it was an event. An event means a party that people enjoy.* (basic)

As the excerpt above demonstrates, the advanced reader in excerpt (6) could not at first infer the word’s meaning, but chose to read subsequent sentences until he found enough textual clues to reach a correct conclusion. In contrast, as she read the sentence with the target word, the basic reader S6 in excerpt (9) drew a quick inference about the

word's meaning based on her target-word level knowledge source, which was incorrect.

In their interaction with texts, therefore, compared to less competent, more competent readers are more likely to assume that the process of lexical inferencing involves guessing an unknown word's meaning based mostly on discourse-level cues in combination with their world knowledge. This finding was expected because questionnaire results indicated that advanced readers perceived discourse meaning and background knowledge as the most popular knowledge sources. More importantly, advanced readers used their knowledge sources more strategically: Not only did they search for other cues when they found certain knowledge unusable but also used all available sources to verify informed guesses about a target word's meaning.

4.4.2. Use of Interactive Processing in Skilled L2 Readers'

Lexical Inferencing

During think-aloud sessions, learners with higher L2 reading proficiency used "interactive processing" during lexical inferencing, that is, they more actively combined bottom-up and top-down cues in

guessing. They were more flexible and strategically employed all available knowledge sources as necessary.

Example 3

Target word: *incredulous*

(10) S1: (*reads aloud: ...from their gods. However, Thucydides was incredulous that the gods caused the plague. He thought others believed it because there was an old, long history about the disease.*) The word *incredulous* looks familiar to me. It reminds me of *incredible*, which means 'hard to believe.' And... (*reads aloud again*) it makes sense because here the word *however* indicates that Thucydides and others thought in a different way. I think it means that Thucydides did not believe the statement. (advanced)

(11) S2: (*reads aloud: 'They defined disease as a punishment from their gods. However, Thucydides was incredulous that the gods caused the plague.'*) Hmm... *disease... incredulous...* (*reads aloud: 'He thought others believed it because there was an old, long story*

about the disease.) Well, the sentences compare and contrast Thucydides and the other people here. Because it says however...it may mean the opposite meaning to the verb believe. I think the word means suspicious or mis-believing, maybe. (advanced)

As in example 3, the meaning of the target word *incredulous* can best be derived when a reader uses a discourse-level knowledge source. Both S1 and S2 from the advanced group used the same knowledge source, differing only in that S1 used the source to verify the derived meaning, while S2 used the source from the beginning of the lexical inferencing process. The first knowledge source S1 used was at the target-word level but still ensured that his target-word knowledge was correct by checking the discourse's flow by reading the subsequent sentence aloud.

(12) S3: I think it means unbelievable because there is the word 'however'. This implies that Thucydides and others had different opinions. And... also, the prefix in- has a negative meaning, I guess. (intermediate)

In excerpt (12), S3 inferred successfully in a similar way to the two advanced participants. He confirmed his guess with knowledge that the prefix *in* carries negative meaning. Still, the other intermediate learner and the two basic learners failed to infer the target word's meaning as shown in excerpts (13) and (14).

(13) S4: *I guess the word incredulous means 'to want' because it says gods. We search for gods when we want something.* (intermediate)

(14) S5: *It means 'excellent.' The word looks very similar to the word incredible. I saw the movie Mr. incredible, and it means outstanding.* (basic)

None of the students who guessed incorrectly used discourse meaning. Rather, they used non-linguistic knowledge of the word itself, a strategy that would hardly work out of context.

Example 4

Target word: *presently*

(15) S2: (*reads aloud: 'Thucydides was the world's first historian who studied and wrote about history. Presently, we get most of our knowledge about ancient Greece from his writing'*) *I think it means now or nowadays. 'Present' means the period of time that is happening now, and '-ly' at the end of the word tells me that this word is an adverb. (reads aloud: presently, we get most of our knowledge about ancient Greece')* *So, we know that Thucydides is a historian that existed in the past. The next sentence says that thanks to him, we, people living at this time, can learn about ancient Greece.*
(advanced)

(16) S3: (*reads aloud: '...from his writing'*) *It means now because present means now.* (intermediate)

(17) S5: (*reads aloud: '...from his writing'*) *It means past. It talks about history and I think I learned this word in the past that it means past.* (basic)

(18) S6: (*reads aloud: ‘...from his writing’*) I think it means... mostly? No, firstly. Because it is located at the beginning of a sentence.

Clearly, from the excerpts above, an advanced reader in excerpt (15) benefitted from a variety of knowledge sources to derive the meaning of *presently*. She used three types of linguistic sources—morphology, sentence grammar, and discourse meaning. Similarly, an intermediate reader in excerpt (16) used a target-word level linguistic cue, morphology. However, both basic learners in excerpts (17) and (18) failed to use appropriate linguistic cues. Again, they did not seem to be interested in whether their guesses made any sense in the context.

Example 5

Target word: *solitude*

(19) S1: (*reads aloud: ‘His writing says that many sick people died in solitude because no one wanted to be near them’*) *solitude... died in solitude... It talks about how sick people died. Maybe it means alone? They may have been lonely because there was no one around them when they were sick. And... also, I don’t know if my*

guess is right but now, I feel like the word solitude is a combination of solo and... I don't know maybe 'tude'? Anyways, solo means alone, too. (advanced)

(20) S3: *(reads aloud: '...wanted to be near them) I think it's a name of a place because of the preposition 'in'. Maybe it talks about where those sick people died. (reads aloud: 'because no one wanted to be near them') I'm not sure though. It's just a place. (intermediate)*

(21) S6: *(reads aloud: 'many sick people died in solitude') It means suddenly. They were sick and they died. It feels like they died all of a sudden. (reads aloud: 'because no one wanted to be near them') (basic)*

The excerpts above also indicate that more advanced readers appeared more effective than less skilled readers in using both top-down and bottom-up cues. For example, advanced readers segmented an unfamiliar word into morphemic parts when they found the information source available. Examples 3 and 4 indicate that while learners with higher L2 proficiency had richer morphological knowledge to use in

lexical inferencing, they tended to rely more on contextual information but turned to morphological information to verify their guesses. In contrast, less competent readers seemed less effective in employing their morphological knowledge to generate an unknown word's meaning.

This section has described the present study's key findings: While reading according to their L2 reading proficiency, Korean EFL learners showed marked variance in their success at guessing words' meanings and their actual practice of lexical inferencing. The next chapter provides a summary of the main findings and their pedagogical implications.

CHAPTER 5.

CONCLUSION

This chapter consists of three sections. Section 5.1 provides a summary of the key findings of the research, followed by a consideration of pedagogical implications for teachers and institutions in Section 5.2. Section 5.3 suggests recommending implications for further research.

5.1. Summary of Key Findings

Conducted at a local middle school in Seoul, Korea, this study investigated the relationship between L2 reading proficiency and lexical inferencing. Learners' data was collected through a self-report questionnaire, a lexical inferencing task, an English reading-proficiency test, and think-aloud protocols.

The main findings were as follows. First, when dealing with an unknown word, both intermediate and advanced groups most frequently used lexical inferencing, and participants at all proficiency levels preferred *knowledge of the topic* as one of the most frequently used strategies. However, advanced and intermediate learners showed a statistically significant difference in use of *discourse meaning* as a

knowledge source for lexical inferencing, with more proficient readers perceiving their use of lexical inferencing as top-down rather than bottom-up.

Further findings indicated that in the relationship between lexical inferencing and L2 reading proficiency, success in lexical inferencing played a significant role in the learner's reading comprehension. Congruent with previous studies, not only did more skilled readers infer correctly and appropriately, but they also exhibited more strategic and thoughtful use of lexical inferencing in use of knowledge sources. Less competent readers, in contrast, not only drew more hasty conclusions on unknown words' meanings but also showed inappropriate or irrelevant use of knowledge sources while reading. These findings clearly demonstrate that strategic, appropriate use of lexical inferencing is an important strategy for L2 text comprehension. Overall, these results were rather expected, considering that a threshold level of vocabulary knowledge is required for successful lexical inferences (Laufer, 1991). In sum, the current study's findings identified some positive relationships between lexical inferencing and L2 reading proficiency. By making more appropriate and effective lexical inferences while reading compared with L2 readers of lower competence, more competent readers tended to interpret texts better.

The study's findings make several contributions to L2 vocabulary learning. First, the study provides deeper insight into the detailed process of Korean EFL learners' lexical inferencing according to their varied proficiency levels and its role in their reading comprehension. Prior to this study, predicting how, while reading, Korean learners of English deal with new words and make lexical inferences was difficult. Second, responses to the study's survey clearly evidence that while reading, learners of English exhibit much reliance on their background knowledge and refer to discourse meaning during lexical inferencing. Lastly, this study attempted to analyze qualitative differences in lexical inferencing according to three reading-proficiency levels, with careful examination of a few representative cases, thus revealing strong correlation between the ability of lexical inferencing and L2 reading proficiency.

5.2. Pedagogical Implications

The study's results confirm that successful lexical inferencing must be recognized as important in second language reading. Clearly, increased knowledge of the relationship between lexical inferencing and reading comprehension is likely to assist individual instructors, not to

mention English learners. Prior experience and knowledge of how to promote strategic use of lexical inferencing in L2 reading classrooms can assist an instructor in becoming more effective as a facilitator and teacher.

For one thing, teachers could help ensure that learners achieve sufficient vocabulary for reading a wide range of authentic texts. L2 readers with insufficient vocabulary knowledge are less likely to use appropriate knowledge sources and to derive unknown words' meanings because contextual clues are unknown to readers. By providing graded reading texts, teachers can enable learners of low proficiency to be extensively exposed to target words in varying contexts, in turn helping them enlarge their vocabulary. Use of images for each target word would help low level readers visualize the word and grasp its intended meaning. As more knowledge sources become available, better lexical inferences can be made.

Second, teachers are encouraged, as an aim of reading instruction, to increase the success of learners' lexical inferencing. They should encourage L2 readers to develop skills for using contextual clues effectively and appropriately to infer new lexical items' meanings. Explicit instruction on lexical inferencing can be integrated with reading activities to guide learners to discuss a target word's meaning through

contextual clues. In particular, providing L2 readers opportunities to monitor their process of lexical inferencing and compare theirs with that of their peers can also be an important part of lexical inferencing practice, thus encouraging students to focus on their learning process rather than learning outcomes.

Third, although Korean teachers of English are required to facilitate L2 readers' practice of skills and strategies while reading, many still emphasize memorizing vocabulary before reading and provide excessive grammar lessons during reading instruction. Inclusion of strategy instruction in the reading classroom might help learners to practice various reading strategies while reading and to become more successful L2 readers.

Furthermore, building learners' background knowledge is important—particularly by providing reading materials on a variety of topics. This study's findings confirm that knowledge of the topic plays a positive role not only in reading comprehension but also in successful lexical inferencing. That is, the more knowledge readers have on a topic, the easier for them to make correct inferences on new lexical items, in turn helping them fully understand a text. Thus, in addition to textbooks, teachers of English need to provide quality reading materials appropriate to an individual learner's language proficiency.

Finally, developers of instructional reading materials must design books that include practical high-frequency words in many spoken and written texts. Most importantly, target words should appear in contexts where learners can easily infer definitions using contextual clues. Moreover, various activities that can reinforce L2 learners' lexical inferencing and build vocabulary knowledge should be included. For basic learners, reading materials with visual aids might help interest them in the topic and develop prior knowledge before reading.

5.3. Implications for Further Research

Results here have provided further evidence that the ability to infer word meanings from context is a fundamental construct in L2 reading performance. However, this study has some limitations.

First, the small sample size did not allow a clear generalized statement about learners' actual performance of lexical inferencing. The number of participants in think-aloud protocols was too small to address the research questions, and it was not, therefore, possible to generalize its findings beyond this study.

Next, this study did not evaluate other qualitative aspects of the

lexical inferencing process except for use of knowledge sources. Provision of think-aloud training and practice sessions could have enhanced participants' detailed and introspective verbal reports. Further research with a larger sample contributing to fuller understanding of lexical inferencing is warranted.

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APPENDICES

APPENDIX 1.	81
APPENDIX 2.	82

APPENDIX 1.

<어휘 전략 설문지>

2학년 반 번

1. 영어 지문을 읽다가 모르는 단어를 마주쳤을 때, 아래 전략을 사용하나요?

항목	매우 그렇다	그렇다	보통이다	그렇지 않다	전혀 그렇지 않다
① 영한사전에서 단어의 뜻을 찾는다.					
② 영영사전에서 단어의 뜻을 찾는다.					
③ 지문의 문맥 속에서 단어의 의미를 추측한다.					
④ 선생님께 도움을 요청한다.					
⑤ 친구에게 단어의 뜻을 아는지 물어본다.					
⑥ 단어 자체에 뜻의 단서가 있는지 찾아본다.					
⑦ 메모해둔다.					
⑧ 기타 (서술하시오.)					

2. 영어 지문을 읽다가 모르는 단어의 뜻을 추측할 때, 어떤 정보를 사용하나요?

항목	매우 그렇다	그렇다	보통이다	그렇지 않다	전혀 그렇지 않다
① 단어의 품사를 알 수 있을 만한 문법적 특징이 있는지 확인하기 위해 모르는 단어를 살펴본다.					
② 같은 문장의 다른 단어들의 의미를 사용한다.					
③ 읽기 지문의 주제에 대한 내 배경지식을 사용한다.					
④ 주변 문장의 문법적 단서들을 사용한다.					
⑤ 단어의 일부 의미가 친숙한지 확인하기 위해 모르는 단어를 살펴본다.					
⑥ 읽기 지문 전체 또는 일부 문단의 내용을 사용한다.					

APPENDIX 2.

Dian & Digit

According to animal **classification**, gorillas are among human being's closest living relatives. Like us, they are smart, social creatures. However, movies such as *King Kong* **aroused** people's fears about gorillas. Dian Fossey changed all this by collecting information that showed that gorillas were gentle animals.

Fossey first became interested in gorillas on a trip she took to an African jungle. She did not want to study gorillas while they were in the **custody** of zoos but hoped to study how they lived in nature. To do this, she decided to live in a mountain forest because she knew that gorillas **flocked** to the hills of the Congo and Rwanda to **graze** on plants. And then she waited.

Fossey soon found the gorillas. She tried to watch them when they would **congregate**, but they **dispersed** when they saw her. However, as time went by, the gorillas became **accustomed** to her. They soon began to treat Fossey like another member of the family.

Fossey's favorite was a baby named Digit. She took care of him when he hurt his hand in 1967. For a time, Digit **clung** to her as if she were his mother. He grew up to be a strong alpha male, the king of his gorilla group. Fossey believed that Digit could understand her love for him. When he was killed by hunters in 1977, her heart was broken.

Fossey knew that gorillas were dying very quickly and soon they may not exist any longer. So, she used her voice to tell Digit's story to the world. Soon, everyone was talking about his terrible death. Fossey created the Digit Fund in memory of Digit.

Gorilla hunters never lived in **compliance** with the laws. When Fossey died, she was buried next to Digit. Scientists and park keepers still **clash** with hunters, but thanks to Fossey, gorillas live free in the wild. Her short life **embodied** great courage, curiosity, and honesty.

Thucydides and the Plague of Athens

Thucydides was the world's first historian who studied and wrote about history. **Presently**, we get most of our knowledge about ancient Greece from his writing. But Thucydides didn't just write about history, he lived through it. However, he almost didn't survive one historical event: the **Plague** of Athens.

In 430 BCE, an army attacked the city of Athens, where Thucydides lived. Behind Athen's large walls, thousands of people gathered to hide from the army. More and more people gathered in the city and the number of people in Athens increased. Then, a horrifying disease broke out. People **summoned** doctors. But it was to no **avail** because no one knew how the disease affected many people. It seemed random. They thought that disease was a punishment from their gods. However, Thucydides was **incredulous** that the gods caused the plague. He thought others believed it because there was an old, long story about the disease. The story said that the gods would send a disease during a war. So, many people gathered at **shrines** to ask the gods to stop the plague. But the situation only worsened because these people stayed so close to each other that they became sick. That's how they learned a **fundamental** lesson about the plague: it moved from person to person.

People wanted to leave the city, but they **dreaded** what the army would do to them. At this time, Thucydides got sick, too. He quickly **scribbled** down notes because he thought he would soon die. His writing says that many sick people died in **solitude** because no one wanted to be near them. The plague **lingered** for two years. But luckily, Thucydides survived. Without his writing, we would not know much about ancient Greece and the Plague of Athens.

국 문 초 록

한국인 EFL 중학생들의 어휘 추론과 영어 독해

박 세 희

외국어교육과 영어전공

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본 연구는 한국인 EFL 중학생들의 어휘 추론 전략과 영어 독해 능숙도의 관계를 탐구한다. 연구 참여자는 한국인 중학생 97명이 참가하였다. 이들은 어휘 추론과 관련한 설문지에 응답한 후, 영어 독해 능숙도 평가를 수행하였다. 다음으로, 연구 참여자 중 91명은 어휘 추론 과업을 수행하고, 나머지 6명은 같은 과업에 대하여 사고 구술을 실시하였다. 본 연구의 결과는 다음과 같다.

첫째, 영어 텍스트 읽기 중 모르는 단어를 마주쳤을 때, 상, 중 집단은 문맥에서 그 뜻을 추론한다는 응답이 가장 높았다. 또한, 상 집단은 모르는 단어 자체에서 뜻을 유추할 수 있는 단어를 고려한다는 응답이 두 번째로 높았다. 이는, 영어 독해 능숙도가 높은 학습자들이 모르는 단어의 뜻을 유추하기 위해 능숙도가 낮은 학습자들보다 많은 시도를 한다는 것을 의미한다. 다음으로, 학습자들이 모

르는 단어의 뜻을 유추할 때 사용하는 지식의 출처(knowledge source)와 관련한 설문조사에서는 독해 능숙도가 높은 학생들은 배경지식과 담화 의미(discourse meaning)를 주로 사용하는 하향식(top-down) 접근에 의존하는 것으로 나타났다. 마지막으로, 학습자들의 어휘 추론 능력은 그들의 독해 능숙도와 통계적으로 유의미한 관계를 보였다. 독해 능숙도가 높은 학습자들은 능숙도가 낮은 학습자들보다 더 정확하고 적절한 어휘 추론 능력을 보였다. 그뿐만 아니라, 상 집단에 속한 학습자들은 어휘 의미 추론을 위한 지식의 출처를 사용함에서도 더욱 세심하고 효과적인 것으로 나타났다.

본 연구의 결과는 효과적이고 적절한 지식의 출처 사용을 통한 정확한 어휘 추론 능력이 영어 텍스트 이해력과 긍정적인 관계가 있음을 밝혔다. 본 연구의 교육적 함의와 한계 및 향후 연구를 위한 제안은 결론에서 심층적으로 논의된다.

주요어: 어휘 추론, 영어 독해 능숙도, 지식의 출처

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