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교육학석사학위논문

The Effects of EFL College Students'
L1 Print Exposure and
L2 Lexical Coverage in English Texts
on L2 Lexical Guessing

한국 대학생의 모국어 인쇄물 노출경험과 영어
텍스트에서의 어휘 밀집도가
어휘 추론에 미치는 영향

2023 8월

서울대학교 대학원
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by

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2023년 8월

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ABSTRACT

The Effects of EFL College Students' L1 Print Exposure
and L2 Lexical Coverage in English Texts on L2 Lexical Guessing

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This study investigates the influence of first language (L1) print exposure on second language (L2) lexical guessing ability in English as a foreign language (EFL) college student. The research explores the relationship between participants' L1 print exposures, and their ability to infer the meanings of unfamiliar words in L2. Furthermore, the study examines the impact of different levels of lexical coverage on participants' lexical guessing performance.

The research methodology involves pilot studies to refine the experimental tasks, followed by data collection through questionnaires and L2 lexical guessing tasks administered to EFL college students. The collected data are analyzed using two-way repeated measures ANOVA and paired sample t-tests with the aid of IBM SPSS Statistics. The findings reveal a significant effect between participants' L1 print exposures, lexical

coverage and their L2 lexical guessing performance. Participants with stronger L1 linguistic backgrounds demonstrated higher proficiency in guessing the meanings of unfamiliar words in L2.

The results revealed that both L1 print exposure and lexical coverage significantly influenced participants' lexical guessing abilities. Participants with higher levels of L1 print exposure demonstrated better performance in guessing the meanings of unfamiliar words. Additionally, the level of lexical coverage, representing the proportion of known words in the text, had a significant impact on participants' lexical guessing skills. However, there was no significant interaction between L1 print exposure and lexical coverage, indicating that the effect of L1 experience on lexical guessing performance did not vary depending on the level of lexical coverage.

Moreover, the study sheds light on the impact of different levels of lexical coverage on participants' L2 lexical guessing performance. The findings suggest that participants performed better in lexical guessing tasks when presented with higher levels of lexical coverage in the target passages. This implies that a greater coverage of known words facilitates the inferencing process and enhances reading comprehension.

These findings emphasize the importance of considering learners' L1 print exposure and the lexical characteristics of the text when assessing their lexical guessing skills. The outcomes of this study have important implications for language educators,

highlighting the significance of considering participants' L1 print exposure, and the levels of lexical coverage in designing effective instructional strategies. By recognizing the role of L1 print exposure and promoting extensive reading practices, educators can create a conducive learning environment that fosters vocabulary acquisition and improves lexical guessing skills in EFL learners.

In conclusion, this study provides valuable insights into the interplay between L1 print exposure, lexical coverage of texts and L2 lexical guessing ability in EFL college students. The research findings contribute to the understanding of individual differences in vocabulary acquisition and inform language educators in developing targeted approaches to enhance lexical inferencing skills.

Keywords: L1 print exposure, Author Recognition Test, L2 lexical guessing, lexical coverage

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CHAPTER 1.

INTRODUCTION

The current study investigates the effects of L1 (first language) print exposures of EFL (English as a foreign language) college students on different lexical coverage of L2 (second language) texts. This chapter will introduce the purpose and background of the study. Section 1.1 discusses the background and purpose of the study. Section 1.2 states the research questions of the study, and the following Section 1.3 presents the overall organization of the study.

1.1 Purpose of Study

Throughout the 20th century, teaching methods, except for the grammar translation approach, have largely advocated for minimal utilization of the learners' L1 (first language) in the classroom (Cook, 2001). Theoretical perspectives and empirical evidence supporting the extensive use of L2 have consequently discouraged the incorporation of L1 in foreign language education for several decades (Cook, 2001; Storch & Wigglesworth, 2003). However, Turnbull (2001) asserts that the promotion of L2 use does not imply that the use of L1 should be entirely excluded. In fact, Cook (2001) suggests that recognizing the L1 as a valuable resource within the classroom environment can

provide diverse opportunities for L2 input. Extensive research has emerged suggesting that the use of L1 in the classroom can have positive effects. Studies on L1 use can be categorized based on their focus, including who uses L1, the context in which L1 is used, and individuals' print exposures with L1.

L1 print exposure of EFL (English as foreign language) learners can be studied through the print exposure in their first language. Earlier studies have demonstrated that the variation in the amount of text individuals have read, known as print exposure, can explain disparities in reading comprehension (Cipielewski & Stanovich, 1992). Individuals who have been exposed to more printed material are more inclined to acquire knowledge about infrequently encountered linguistic structures compared to those with limited print exposure (Freed et al., 2017). Furthermore, greater exposure to print helps readers in developing a deeper understanding of semantic relationships and concepts, as well as acquiring skills such as logical reasoning (Scribner, 1981; Stanovich & Cunningham, 1993). In fact, the level of exposure to written language emerges as another significant factor influencing variations in connective competence. This finding aligns with previous research conducted on adults (Zufferey & Gygax, 2020a).

In the field of L1 literacy research, Stanovich and his colleagues have conducted studies exploring the potential links between reading-related skills, such as vocabulary and general knowledge, and exposure to printed material over time. These investigations (Cunningham & Stanovich, 1991; Stanovich & Cunningham, 1992, 1997; West &

Stanovich, 1991) hypothesized that students who demonstrate fluent reading and strong comprehension abilities are more likely to show better reading performance compared to those who struggle with word decoding and fluency. Furthermore, it was proposed that students enjoy reading are inclined to engage in reading more frequently, thus exposing themselves to a greater volume of printed material over time. The findings of these studies consistently revealed a strong association between regular exposure to print through reading and early success in learning to read, as well as subsequent development of language-related skills such as vocabulary, spelling, grammar, and general knowledge (Cunningham & Stanovich, 1997; Stanovich, 1993).

Studies have explored the broader effects of print exposure, suggesting that frequent reading provides individuals with opportunities to enhance their understanding of semantic relations, concepts, categorization, history, and culture, as well as develop skills like logical reasoning (Scribner & Cole, 1981; West et al., 1993). However, accurately measuring an individual's level of print exposure has proven challenging. Self-report measures, often in the form of questionnaires, have been commonly used to assess print exposure by asking individuals to report their reading habits and preferences (Greaney, 1980; Guthrie, 1981).

However, there are also challenges that self-report methods are susceptible to criticism regarding potential social desirability biases, where individuals may overstate their reading frequency (Ennis, 1965; West et al., 1993). To address these challenges,

Stanovich and West (1989) developed the Author Recognition Test (ART) and the as alternative measures of print exposure. Participants are not directly asked about their reading time, and they are discouraged from claiming recognition of names they do not genuinely know due to the penalty associated with marking a distractor. Thus, in the present study, ART and reading habit questionnaires are implemented to study the L1 print exposure of participants.

Previous research has consistently shown that print exposure is a strong predictor of vocabulary knowledge. Numerous studies (Cunningham & Stanovich, 1991; Martin-Chang & Gould, 2008; Senechal, LeFevre, Hudson, & Lawson, 1996) have established a significant correlation between print exposure and vocabulary skills. Thus, the present study is rooted in the field of second language acquisition, aiming to understand the factors that contribute to successful L2 lexical guessing in different lexical coverages. This research aims to address an area that has received little attention in L2 vocabulary research, namely the role of learners' first language (L1) print exposure in L2 lexical guessing. By investigating the role of L1 print exposures on lexical guessing ability, this study aims to examine print exposure which will add to the understanding of the complex factors that contribute to individual differences in language learning.

Little is known about how non-native English speakers' print exposures in their first language (L1) might affect their ability to guess the meanings of unknown words in English. It is widely known that non-native English speakers' print exposures in their first

language (L1) affect their ability to guess the meaning of unknown words in English texts, which is an important component of reading comprehension and vocabulary acquisition. As previous research has shown that individuals with stronger vocabulary skills tend to be better at guessing the meanings of unknown words in context (Fraser, 1999; Hirsh & Nation, 1992), this study seeks to fill this gap in the literature and contribute to a better understanding of the factors that contribute to L2 lexical guessing of non-native English speakers, specifically, L1 print exposure.

As high L1 print exposure, increased print exposure of L1, leads to higher vocabulary knowledge of EFL learners, the importance of vocabulary size is once again emphasized. Vocabulary size holds substantial influence over language learning, with a particular impact on reading comprehension. While it is acknowledged that foreign/second language readers may not attain the same level of lexical mastery as native speakers, it would be misguided to assume their incapacity to comprehend written materials (Laufer, 1989). Within this context, Hu and Nation (2000) assert that EFL readers who can effortlessly comprehend 98% of the words composing the text exhibit a commendable level of proficiency. On top of this, Hirsh and Nation (1992) propose that achieving 98% lexical coverage empowers readers to grasp written texts for pleasure unassisted. However, the establishment of an optimal criterion for evaluating known vocabulary remains an ongoing challenge when considering individuals who use English as a foreign language (EFL). Generally, it is assumed that if EFL readers can comprehend at least 95% of the

words in a given text, they have the ability to grasp the majority of its content, a task typically requiring knowledge of approximately 3000 word families or 5000 lexical items. Nevertheless, it is crucial to recognize that a higher coverage percentage corresponds to a decreased density of unknown words (Laufer, 1997). Given the considerable emphasis placed on lexical inferencing in numerous studies (Read, 2000), the first objective of this paper is to investigate the influence of the number of unknown words, lexical coverage on lexical guessing.

In order to increase the lexical coverage of EFL learners, vocabulary acquisition is an essential component of second language acquisition to guess the meanings of unknown words which is a key skill for language learners. Various aspects of word knowledge, such as vocabulary breadth and depth, have been extensively investigated (e.g., Nassaji, 2006; Xun and Sun, 2006; Albrechtsen et al., 2008). For example, Nassaji (2006) explored the relationship between vocabulary depth, inferencing strategy use, and word-meaning retrieval from context among English learners. The previous findings indicated that learners with stronger depth of vocabulary knowledge employed certain strategies more frequently and effectively than those with weaker knowledge. It has been also shown that guessing word meanings in context is a useful strategy for vocabulary acquisition (Hulstijn, Hollander, & Greidanus, 1996) and that individuals with stronger vocabulary skills tend to be better at guessing the meanings of unknown words in context (Fraser, 1999; Hirsh & Nation, 1992). This study's another aim is to study the influence of lexical

coverage of English texts on EFL college students' L2 lexical guessing.

The findings of this study will have important implications for language educators, suggesting that L1 print exposures may be a factor to consider when designing vocabulary instruction for non-native English speakers. By better understanding the factors that contribute to individual differences in lexical guessing, educators can develop more effective instructional strategies to fit the needs of their students.

This study builds upon previous research by examining the relationship between L1 print exposures and lexical guessing ability in a sample of EFL college students. The following study will shed light on the factors that contribute to L1 lexical guessing in language learning, L1 print exposure and lexical coverage of the English text.

To achieve the purpose of this study, two lexical guessing tasks were administered to a sample of EFL (English as Foreign Language) college students, and information about their L1 print exposures were collected through two questionnaires. The study will use quantitative methods to analyze the data and determine the relationship between L1 experiences and lexical guessing ability.

1.2 Research Questions

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

1. What are the L1 print exposures of EFL college students in intermediate and upper-intermediate level of English proficiency?
2. How does L1 print exposure and lexical coverage independently affect the L2 lexical guessing scores?
3. Does the interaction effect between lexical coverage and L1 print exposure on Korean EFL college students' L2 lexical guessing exist?

1.3 Organization of the Study

The present study is organized into six thematic chapters. Chapter 1 provides an introduction to the research by outlining the background and rationale that have led to the study, as well as stating the specific research questions it seeks to address. Chapter 2 presents a comprehensive review of the relevant literature, highlighting key empirical studies on lexical guessing in second language(L2) contexts. The review encompasses important findings from previous research and identifies gaps that exist in the current knowledge base. Chapter 3 outlines the research methodology, detailing information about the participants and research instruments employed in the study. The chapter provides a

clear description of the overall research procedure and specifies the instruments employed. Chapter 4 presents the main findings derived from the data analysis conducted in the study and Chapter 5 offers interpretation of the findings. Finally, Chapter 6 summarizes the key findings and focuses on the research implications of the study, highlighting its contributions to the field. Additionally, this chapter acknowledges the limitations of the research.

CHAPTER 2.

LITERATURE REVIEW

This chapter provides an overview of previous research related to L1 print exposures, lexical guessing, and lexical coverage along with a proposed summary of each factor discussed in the current study. Section 2.1 focuses on the L1 print exposure. Following sections, Section 2.1.1, 2.1.2, 2.1.3, and 2.1.4 discusses the variables used to measure L1 print exposure, including previous studies presenting the usage and importance of print exposure. Section 2.2 discusses the L2 lexical coverage by including explanation and previous studies on L2 lexical guessing in reading comprehension and lexical guessing. Section 2.3 explains the lexical guessing of L2 (second language) learners, followed by discussing the factors which influence lexical guessing (2.3.1) and the relationship between L1 and lexical guessing (2.3.2).

2.1. L1 Print Exposure

2.1.1. The Role of L1 in L2 Reading

The significance of the first language (L1) arises from the linguistic interdependence hypothesis (Cummins, 1979, 1991, 2000), which suggests that L1 proficiency has a notable impact on L2 learning outcomes. According to this hypothesis, the shared underlying proficiency that supports both L1 and L2 language learning facilitates the transfer of L1 skills, such as phonological-orthographic, syntactic, and semantic processing, to L2 development.

Several studies have expanded upon the L1-L2 interdependence hypothesis and found strong associations between L1 knowledge and skills and L2 learning outcomes. Cummins (1979) proposed the Linguistic Interdependence Hypothesis, which suggests that L1 and L2 are interconnected and rely on a shared underlying proficiency. Additionally, Cummins (1979) put forth the Threshold Hypothesis, which posits that the impact of L1 on L2 learning is influenced by the level of proficiency in the L1 and the timing of L2 acquisition. As another example, van Gelderen et al. (2004, 2007) discovered that L1 reading ability played a significant role in L2 reading comprehension, supporting the idea of reading skill transfer from the L1 to the L2. Empirical evidence that L1 reading comprehension contributes significantly to L2 word decoding, L2 reading comprehension, and L2 proficiency was found by Sparks and colleagues (Sparks, 2012; Sparks, Patton, Ganschow, Humbach, & Javorsky, 2006, 2008). They suggested that individual variations

in L1 abilities result in similar differences in L2 learning.

Considering that vocabulary learning occurs as a byproduct of reading and is linked to one's level of reading comprehension, the substantial role of L1 reading ability in L2 reading comprehension implies that students' L1 reading ability may also influence the process of incidental L2 vocabulary learning through reading. This provides the necessity to investigate the relationship between L1 reading proficiency and incidental L2 vocabulary learning through reading among L2 learners.

Observations of reading strategies among EFL (English as Foreign Language) learners with different L1 backgrounds have indicated differences, pointing to the influence of linguistic and cultural factors. A study proceeded by Abbott (2006) examine this hypothesis by comparing the reading processes of seven Arabic-speaking and eight Chinese-speaking intermediate EFL learners. The findings revealed systematic variations between the two groups. Arabic-speaking EFL learners outperformed their Chinese counterparts in utilizing top-down reading strategies, such as skimming, connecting, and inferring, when answering questions. Conversely, Chinese-speaking EFL learners demonstrated better performance in utilizing bottom-up reading strategies, including breaking words into smaller parts, scanning, paraphrasing, and matching. Abbott (2006) concluded that the distinct L1 literacy practices of these groups accounted for their differential aptitude in employing EFL reading strategies. As described in previous studies, L1 experiences have great effect on students' L2 learning.

Another study conducted by Bang and Zhao (2007) examined the use of reading strategies among advanced Korean-speaking and Chinese-speaking EFL learners. The focus was on how word recognition and processing skills developed in the learners' first language influenced the strategies used to determine the meanings of unfamiliar English words. The findings indicated that Korean-speaking EFL learners tended to rely on phonological strategies, while Chinese-speaking EFL learners relied more on visual-orthographic strategies when reading English texts. When attempting to guess the meaning of new words from context, Korean EFL learners would break down the words into smaller syllabic components and analyze them to derive meaning (e.g., hyper/amnesias, neuro/transmitters). On the other hand, Chinese EFL readers did not engage in word breakdown but instead focused on the overall spelling of the target words, relating them to other words with similar spellings (e.g., potency/potential). The result of this study presents the difference in the strategies to guess the meaning of unknown words according to different first language. It evidently shows how the first language affects the strategies in L2 learning and reading.

Numerous studies conducted over several years have consistently demonstrated that L2 learners who exhibit significant variations in L1 skills, particularly L1 literacy, also display notable differences in L2 proficiency and achievement in L2 classrooms. As L2 proficiency is affected by L1 literacy, there exists a necessity to consider L1 literacy, the exposure to written language of learners. Furthermore, comparative studies have

revealed that high-achieving L2 learners possess stronger skills in word decoding, pseudoword decoding, spelling, and writing compared to low-achieving L2 learners, even after controlling for IQ differences (Ganschow & Sparks, 2001; Sparks, Ganschow, & Patton, 2008a). Other previous studies investigating the best predictors of L2 proficiency have found strong associations between early L1 skills, especially L1 literacy, and subsequent proficiency in the L2 (Sparks et al., 1997; Sparks, Patton, Ganschow, Humbach, & Javorsky, 2006). Although several questions regarding cross-linguistic transfer remain unanswered, the findings have led researchers to speculate that the development of L2 literacy involves a repeated process similar to L1 literacy, contingent upon the similarity of literacy experiences between the two languages involved (Koda, 2009, p.74).

2.1.2. Previous Studies on Print Exposure

Numerous studies in Western cultures have investigated the relationship between college students' print exposure and their reading-related skills. For example, Chateau and Jared (2000) found that levels of print exposure were highly in relation with lexical-decision latency. On the other hand, Stanovich and West (1989) reported that it served as a better predictor of spelling ability than reading comprehension and vocabulary. Stanovich and his colleagues put forward the hypothesis that variations in skills related to literacy would be associated with differences in exposure to printed material (1989). To

assess print exposure, they developed checklists with control items that measured reading outside of school. Stanovich (2000) provided a comprehensive description of the development and validation of these measures. In their initial study, Stanovich and West (1989) administered two of these checklists, namely the Magazine Recognition Test (MRT) and Author Recognition Test (ART), and discovered that individual differences in print exposure were linked to distinct variations in orthographic processing, even after accounting for differences in word decoding skills.

Furthermore, several studies have reported that print exposure is significantly associated with vocabulary (Martin-Chang & Gould, 2008; Stanovich & West, 1995), verbal fluency (Stanovich & Cunningham, 1992), reading comprehension and reading rate (Martin-Chang & Gould, 2008), and general measures of achievement in reading and reading-related domains. Given the consistent evidence from the related literature, linking print exposure to individual differences across many reading-related dimensions is crucial in developing a reliable instrument to assess the students' level of print exposure.

A particular version of the ART was used in numerous studies and was modified if needed. The popular authors were those who regularly appeared on fiction and non-fiction best-seller lists, and they were selected from major categories of fiction such as mystery/detective, romance/Gothic, spy/intrigue, occult/supernatural, historical novels, Westerns, short stories, and science fiction. Non-fiction categories included sports, science,

politics/current events, humor, religious, history, biography, and business/finance. The foils were names taken from the editorial board of a professional journal that were unfamiliar to all respondents in the study. The purpose of including foils was to prevent respondents from simply checking all the names.

As the original ART was intentionally biased toward out-of-school reading experience, and authors that appeared in the school curriculum were avoided. The scoring on the task was determined by subtracting the number of false numbers. Later on, the original version of the ART was revised into a 25-item instrument containing the names of 16 authors and 9 foils in West and Stanovich's (1991) study. In several succeeding studies, the ART was further revised into an 80-item version containing 40 authors and 40 foils (Stanovich & Cunningham, 1992; Stanovich et al., 1995).

Among different measurements which have been frequently used to assess print exposure, the ART has remained as the most sensitive measure of print exposure. This was because the writing styles of individual authors influence readers' selection of reading materials, and avid readers usually have their favorite authors. Magazines and newspapers, on the other hand, represent collections of works of many authors and, therefore, are of less distinctive value.

In order to be used in various studies, the Author Recognition Test (ART) has been revised and developed in several English-speaking countries beyond the United

States. In Canada, Chateau and Jared (2000) developed a version of the ART for college students. They found that levels of print exposure were highly correlated with both orthographic and phonological word recognition efficiency. In Australia, 1989 and 1992 versions of the ART for Australian college students were revised (Burt and Fury, 2000) and found that level of print exposure was a better predictor of spelling ability than the contributions of reading comprehension and vocabulary. In the United Kingdom, Masterson and Hayes (2007) developed new versions of the ART and the Title Recognition Test (TRT) for adults. The initial list of authors and titles for the UK-ART and the UK-TRT were equally distributed among four sources: the top 100 most-loaned titles according to a library for 2002 and 2003, the Nielsen Top 100 fiction titles purchased before September 2004, the top-ranked list at an online bookshop, and the titles or authors that had recently been awarded prizes. These lists were then pilot-tested, and the final lists were formed by deleting the items that were least often correctly identified. As ART was modified into numerous versions, the ART was modified in order to be utilized in this current study.

Stanovich and West (1989) have also conducted a study relating to ART having noteworthy results, which gave reasonable evidence to be used in the current study. First, they found a strong correlation between the Author Recognition Test (ART) scores and word processing ability. Specifically, individuals who scored higher on the ART had better performance on the Experimental Spelling Test (EST) and the Wide Range

Achievement Test - spelling (WRAT). Second, the study showed that ART scores were related to orthographic processing ability, which is independent of phonological processing ability. After removing the phonological processing factor, ART scores were also a strong predictor of variance in orthographic processing. Third, the study showed that ART scores were not related to social desirability, indicating that it was a more objective measure of print exposure than self-report questionnaires. Therefore, the ART has been recognized as an objective measure of print exposure that is related to language ability and has been widely used to measure an individual's variability in print exposure. Many studies have reported the effectiveness of ART in predicting various language abilities (Mol & Bus, 2011). Further research has also linked ART scores to online reading behaviors, such as mean fixation durations during sentence reading (Choi et al., 2015), indicating the ART's ability to assess print exposure and its relation to both offline and online reading performance.

Research demonstrating the correlation between ART scores and English language ability across various measures of ability (Mol & Bus, 2011) also exists. However, only one study has explored the association between ART and language ability in Asian languages (Chen & Fang, 2015). The authors developed a Chinese version of the Author Recognition Test (CART) and tested whether it was related to measures of reading ability in college students in Taiwan. The results indicated that CART scores were significantly correlated with offline reading measures such as vocabulary size and

reading comprehension, indicating that measures of print exposure are valuable predictors of reading ability even in countries where English is not the dominant language. (Chen & Fang, 2015).

In conclusion, the ART is a widely used measure of print exposure that has undergone several revisions. Recent studies utilizing updated and newer measures of print exposure have provided further support for the findings of Stanovich et al. (Acheson, Wells, & MacDonald, 2008). The results from these studies, which have consistently demonstrated that differences in skills related to literacy are associated with individual variations in reading volume, provide support for the environmental opportunity hypothesis. While other tests, such as the MRT and NRT, have been used to assess print exposure, the ART remains the most sensitive measure due to its focus on individual authors and their writing styles. By measuring relative individual differences in print exposure, the ART provides valuable insight into the L1 print exposure of college students and other populations as well.

2.1.3. Reading Habits

In recent years, several researchers have put forth different perspectives on the nature of reading. While Rosli et al. (2018) states, reading is primarily a process of comprehending the writer's message, Alnahdi and Aftab (2020) see it as a means of

accessing a broad range of information, leading to a better understanding of the world. Meanwhile, Al-Jarf (2021) suggests that reading is a multifaceted cognitive process that allows readers to enhance their knowledge for personal and academic growth. Previous studies have also similarly viewed reading as a mode of communication between the writer and the reader. Baron (2017) and Bhan & Gupta (2010) further suggest that reading is an art of decoding and interpreting messages from various written materials. Furthermore, Hassan et al. (2021) state that reading habits influence readers' preferences, interests, attitudes, and reading problems during their secondary education. Reading habits refer to students' reading preferences, interests, attitudes, and difficulties encountered while reading during their secondary education in Hassan et al.'s study, which have been adjusted to be utilized in the current research.

The term 'habit' holds significant importance within the field of education and psychology. According to Chaplin (2000), the concept of habit encompasses several meanings: (1) a learned or acquired response, (2) an activity that becomes automated through extensive practice, (3) a consistent pattern of thought or attitude, (4) a characteristic behavioral trait, and (5) a drive that is acquired or learned. The importance of the term 'habit' and its linkage with 'reading' provides the reliability in using reading habits questionnaire in order to measure the L1 print exposure.

Zwiers (2004) explains that reading habits specifically pertain to the automatic and unconscious processes involved in constructing meaning from written text. These

habits refer to the unconscious ways readers engage with textual material to derive the meaning. He further highlights that comprehension and reading habits are the instantaneous thoughts that proficient readers rely on active construct meaning. Thus, enhancing reading habits consistently supports readers in actively constructing meaning.

Similarly, Hasanah (2017) emphasizes that reading habits are an essential need, comparable to daily nutrition. Students engage in this activity as a habitual action. However, developing reading as a habit is not easy as it requires a lengthy process, consistent practice, and high motivation from the reader.

Reading habits involve the active process of constructing meaning, emphasizing the importance of promoting engagement between readers and texts (Kucer, 2005). Kucer (2005) highlights that reading is a functional act that occurs within the context of language users and their situational context. Reading habits encompass a set of skills related to deriving meaning and understanding printed words (Linse, 2005). These habits encompass various aspects, including vocabulary mastery, linguistic knowledge, print exposure, and reading strategies. The primary function of reading habits is to convey meaning, integrate information visually and non-visually, and express the ideas. Ostrov (2002) identifies the two factors that influence reading habits of learners: understanding information accurately and being able to remember and apply it when necessary.

It has been widely announced that L1 reading habits and strategies can

influence L2 reading habits. Readers tend to transfer the strategies they have developed in their first language to the second language reading process. This transfer can include comprehension strategies, such as predicting, summarizing, and making inferences, as well as word recognition strategies. As L1 print exposure provides readers with knowledge of language structures, grammar, vocabulary, and discourse patterns, this awareness of language structure can contribute to L2 reading habits by helping readers recognize and interpret linguistic features in the second language text.

However, there are limitations to self-reported measures of reading habits. First, people may not accurately report their reading habits, either because they have a poor memory of how much they read or because they want to present themselves in a positive light (Fisher & Inouye, 1990). Second, self-report measures do not account for individual differences in reading speed and comprehension, which can affect the amount of time needed to read a given amount of text. Furthermore, although questionnaires and diary studies are more direct measures of reading volume, self-report reading questionnaires can be biased due to socially desirable responses (Stanovich & West, 1989).

Therefore, researchers have sought to develop more objective measures of reading habits, such as monitoring actual reading behavior with the use of electronic devices (e.g., e-readers, tablets) or tracking reading-related activities, such as borrowing books from a library, buying books, or visiting bookstores (Merga & Williams, 2018). Overall, while self-reported measures of reading habits have been useful in

understanding individual differences in literacy habits, there is a need for more objective measures that can capture the complexity of reading behavior and its relationship to broader sociocultural factors.

2.1.4. Author Recognition Test

One way to determine how much a person reads is through proxy tests that measure their level of print exposure. The Author Recognition Test (ART), developed by Stanovich and West (1989), is a well-known example of such a test. In this test, participants are presented with a list of author names and distractor names that could plausibly be real authors. Participants are then asked to identify which names belong to real authors and to ignore any names that do not. The resulting score is calculated by subtracting the number of incorrect responses from the number of correct ones. Other tests, such as the Magazine Recognition Test (MRT) for measuring knowledge of magazine titles (Stanovich & West, 1989) and the Title Recognition Test (TRT) for assessing knowledge of book titles (Cunningham & Stanovich, 1990), have also been used to assess print exposure. These tests are based on the linking hypothesis that the amount of reading materials to which a person is exposed correlates with their reading skills (Mol & Bus, 2011; Weinberger, 1996). The assumption is that greater exposure to reading materials leads to greater awareness of literature and reading sources, which translates into higher recognition scores.

The Author Recognition Test (ART) has been found to be a reliable tool for assessing literature recognition by directly asking participants to identify author names from a list of both author and non-author names. The ART is a superior predictor of reading-related variables such as spelling ability, word recognition, and cultural literacy, compared to other recognition tests like magazine or newspaper recognition tests (Stanovich & West, 1989; West, Stanovich, & Mitchell, 1993). Additionally, the ART has high reliability with alpha scores ranging from .75-.89 (Mol & Bus, 2011; Stanovich & West, 1989).

Also, the Author Recognition Test (ART) is a valuable tool for measuring print exposure, as it is less prone to socially desirable responses than self-report reading questionnaires. Furthermore, diary studies are valid but not often used due to their time-consuming nature, while the ART is quick and non-intrusive (Carp & Carp, 1981; Mol & Bus, 2011). The ART and related book title recognition tests, such as the Children's Title Checklist or Children's Author Checklist, have been shown to successfully predict vocabulary and word recognition in children (Cunningham & Stanovich, 1990; Sénéchal, LeFevre, Hudson, & Lawson, 1996).

The success of the ART in measuring extracurricular reading is supported by various types of evidence. West et al. (1993) found that individuals who had been reading before completing the ART scored higher than those who had not been reading. Moreover, students who prefer reading as a leisure activity over other activities, such as

music or television, also tend to score higher on the ART (Mol & Bus, 2011).

Additionally, ART scores correlate with self-reported time spent reading, especially for fiction (Acheson, Wells, & MacDonald, 2008).

While it is true that detecting personally reading books by the authors (ART) correlates more strongly with reading ability than simply recognizing the authors' names without having read their work (Martin-Chang & Gould, 2008), ART does not assume that recognizing an author's name implies having read their work. Rather, it assumes that reading a lot increases the likelihood of exposure to authors' names, making it easier to recognize them. As a result, the ART measures a particular type of knowledge that reflects differential practice at reading, with differences in practice influencing reading skill and the degree to which reading is a rewarding experience (Stanovich, 1986). This leads to a "Matthew effect," with print exposure stimulating reading development, making reading more rewarding, and promoting further reading. This effect accounts for an increasing amount of variance in reading skill from elementary school to college (Mol & Bus, 2011).

It can be asserted that the ART is a dependable and valid measure for evaluating proficient native speakers of English at the university level, and it can be adapted for use in different languages and populations. However, it remains uncertain whether the ART can be utilized without modification as a reliable tool for studies that involve comparing native and non-native. Such comparisons are crucial for addressing significant theoretical

and practical questions in psychology and education. Thus, a uniform instrument is needed in these fields that can be used to compare exposure to print across populations with variability in reading skills in both their L1 and L2.

The reliability of the ART for proficient native readers of English has been established through numerous studies. A new version of the ART was developed to address the issue of outdated author names in the original test. They reduced the item list to 130 items (65 author names and 65 foils), keeping only 15 of the original author names (Acheson, Wells & MacDonald, 2008). To show the evidence of the new ART, Moore and Gordon (2015) conducted a psychometric study of 1,012 students at the University of North Carolina to evaluate the discriminative value of each item on the ART. They proposed a reduction of the item list to 100 of the most discriminative items (50 author names and 50 foils) and confirmed the validity of the adjusted version as a predictor of eye movements during reading for comprehension. Choi et al. (2015) and Kuperman and McCarron (2019) have also supported the validity of the ART. All correlations between mean gaze duration and the 100-item ART score were highly significant at $p < .001$ in Moore and Gordon's (2015) study, providing further evidence of the reliability of the ART.

A variety of ART versions have been developed in different languages and for different populations, demonstrating the widespread utility of this measure. Versions of the test have been created for Hebrew (Shatil, Share, & Levin, 2000), Dutch (Vander

Beken & Brysbaert, 2018), Korean (Kim & Krashen, 1998a), Chinese (Chen & Fang, 2015), and for readers in the United Kingdom (Masterson & Hayes, 2007) and Canada (Chateau & Jared, 2000; Sénéchal et al., 1996). Additionally, children's versions of the ART (sometimes called CART) have been developed and tested (Cipielewski & Stanovich, 1992; Ricketts, Nation, & Bishop, 2007). Self-administered versions of the ART have also been developed, which contain no foils but still accurately predict vocabulary size (Krashen & Kim, 1998).

There have been studies that used the ART and similar methods to evaluate print exposure in native English-speaking cohorts with varying levels of proficiency, such as unskilled versus skilled child readers, older versus college-age readers, and high- versus low-skilled postsecondary readers. Additionally, the English version of the ART has been utilized to predict literacy skills in second-language learners of English. However, the reliability of the ART for populations outside of native English speakers with university-level reading proficiency has not been systematically analyzed. This lack of analysis may undermine comparative research efforts. Therefore, the reliability of the ART for native English speakers with below-university level reading proficiency and non-native readers of English further needs to be investigated (Ricketts, Nation, & Bishop, 2007; Stanovich, West, & Harrison, 1995; Lewellen, Goldinger, Pisoni, & Greene, 1993; Kim & Krashen, 1998b).

It is reasonable to anticipate that the reliability of the ART will differ across

populations due to certain factors. Firstly, the ART's item selection is mainly representative of fiction authors from the Western literary tradition who write in English, such as James Joyce and Ernest Hemingway, but not necessarily those writing in English within other literary traditions. Thus, for non-native speakers of English, the materials they read may not be in English or may not be represented in the ART's item selection. Secondly, research indicates that reported time spent reading academic textbooks and fiction is negatively correlated (Acheson, Wells, & MacDonald, 2008), and non-native speakers enrolled in English educational programs may read predominantly academic material, with limited exposure to fiction. This may result in lower performance on the ART due to the specificity of the English reading material to which L2 readers are exposed, leading to possible differences in ART scores that reflect cultural disparities across diverse populations.

2.2. L2 Lexical Coverage in Reading Comprehension

2.2.1. L2 Lexical Coverage in Reading Comprehension

A key question regarding vocabulary and comprehension is how many words of a text a reader should know in order to understand it reasonably well. Previous studies have attempted to address this question and suggest that understanding 95% of the words could result in minimal comprehension, reflected in a score of 55%–60% on a reading

test. On the other hand, achieving 98% coverage is necessary for adequate comprehension, reflected in a score of 70% and above (Hu & Nation, 2000; Laufer, 1989; Laufer & Ravenhorst-Kalovski, 2010; Schmitt, Grabe, & Jiang, 2011). These figures of 95% and 98% have been referred to as the minimal and optimal lexical coverage for written text comprehension.

Reaching the 95% threshold requires a vocabulary size of approximately 5,000 word families, while the 98% threshold requires around 8,000 word families (Laufer & Ravenhorst-Kalovsky, 2010; Nation, 2006). Therefore, the pedagogical implication of this research suggests that learners should acquire a sight vocabulary of at least 5,000, preferably 8,000 word families if they intend to read authentic texts like newspapers and academic articles. In the context of novels, the 95% threshold can be achieved with knowledge of 4,000 word families, while in spoken English it can be reached with 3,000 word families, and in graded readers with a sight vocabulary of 2,000 word families (Nation, 2006). Sight vocabulary refers to words that are known well enough to be understood without context, and encountering them in a text allows for quick recognition and decoding without cognitive effort. Having a large sight vocabulary is believed to contribute to reading fluency by freeing up cognitive resources for higher-level reading processes, such as comprehending the text content and its implications (Mezynski, 1983; Pulido, 2007; Segalowitz, 2007).

However, there is another way to reach the same lexical thresholds during reading. Readers with less than 5,000 or 8,000 word knowledge, who understand less than 95% and 98% of a text's words, can infer some unknown meanings that would increase the percentage of comprehended words. This means that the required threshold does not necessarily consist of 95% or 98% of words one is familiar with before reading a text. The pre-reading familiar vocabulary could be somewhat smaller but supplemented during reading by correctly inferring unknown words. Reaching the threshold lexical coverage in such cases depends on several conditions that enable correct inference, such as the availability of contextual clues and comprehension of the surrounding context.

As considering lexical coverage for L2 reading comprehension is unavoidable, further studies have sought for other implications. One important implication of studying lexical coverage is determining the vocabulary size required for learners to read academic texts without assistance. Various studies have proposed different lexical coverage figures, such as 95% or 98%, for achieving comprehension, while some research has not found a specific threshold (Schmitt et al., 2011).

Hu and Nation (2000) conducted a study to examine the impact of 80%, 90%, 95%, and 100% lexical coverage on reading comprehension using a 673-word fictional narrative. They created different versions of the narrative by introducing nonwords. Adequate comprehension was defined as the average reading comprehension score achieved by participants when reading the version with 100% lexical coverage. The

study found that none of the participants who read the 80% version were able to comprehend it adequately. Only a few participants achieved adequate comprehension with the 95% lexical coverage version, and even fewer with the 90% version. Based on the comprehension results of the 95% lexical version, Hu and Nation (2000) emphasized that 98% lexical coverage was necessary for unassisted pleasure reading of fiction.

Since the publication of Hu and Nation (2000), the figure of 98% lexical coverage has been widely cited and used in many studies to claim that research participants have adequate comprehension to read fiction texts used in studies on vocabulary acquisition (e.g., Hu & Nassaji, 2014; Pellicer-Sánchez, 2016). Laufer (2020) examined the effects of 90%, 95%, and 98% lexical coverage on the lexical inferencing and reading comprehension of high-school students whose first language is Arabic when reading a fiction text. Laufer (2020) used the 90% and 95% lexical coverage versions from Hu and Nation (2000) and created a 98% version by introducing nonwords. Laufer (2020) found that participants who read the 95% version scored higher than those who read the 98% and 90% versions. This result raises the question of whether 98% is indeed the optimal figure for narrative reading comprehension. However, it should be noted that both studies analyzed short fiction texts with 3-4 lexical coverage figures (80%, 90%, 95%, and 100% in Hu and Nation; 90%, 95%, and 98% in Laufer) and had relatively small sample sizes. To provide a more comprehensive understanding of the relationship

between lexical coverage and reading comprehension, further replications with different lexical coverage figures and larger sample sizes are necessary.

2.2.2 Lexical Coverage in Lexical Guessing

Lexical coverage is a variable that mediates the relationship between unknown words in a text and their understanding. It refers to the proportion of unknown to known words in a text. Lexical coverage pertains to the extent to which readers and listeners are familiar with the words present in the given input. It is measured by the proportion of known words in relation to the total number of words. For instance, if a text contains 100 running words and five of the words are unfamiliar, the lexical coverage of that text would be 95%. Numerous studies have explored the relationship between lexical coverage and comprehension, consistently demonstrating that higher levels of lexical coverage, surpassing 90%, are associated with improved comprehension (Bonk, 2000; Laufer, 1989; Schmitt et al., 2011; Van Zeeland & Schmitt, 2013).

Laufer and Ravenhorst-Kalovski (2010) have proposed that the adequate lexical coverage figures for comprehension are 95% and 98%. To provide a clearer understanding of the percentage of lexical coverage, it is helpful to consider the amount of effort required to comprehend a text. For instance, a typical line of typed text contains around 14 words, and a page of text usually has 400 running words. At 95% lexical coverage, there is one

unknown word out of every 20 words, resulting in roughly two unknown words per three lines and 20 unknown words per page. To investigate the vocabulary knowledge required to achieve the 95% and 98% coverage figures, studies on lexical profiling have been conducted. These studies (Nation, 2006) have investigated the number of words necessary to comprehend different types of discourse.

The minimum and optimal lexical coverage figures for understanding written texts are 95% and 98%, respectively. These figures were suggested by Nation (2001), who identified the probabilistic threshold as 98%. Nation further explained that at this coverage level, almost all learners have the potential to achieve adequate comprehension. However, if a lower standard for comprehension is applied, such as minimally acceptable comprehension, then the possible percentage is likely to be 95% coverage, as seen in Laufer's study (Nation, 2001, p. 147).

Hu and Nation (2000) also conducted a study to explore the relationship between lexical coverage and reading comprehension. They formed four coverage groups (80%, 90%, 95%, 100%) by replacing some words in the text with non-words for the below 100% coverage groups. The remaining words in the text were selected from the 2,000 most frequent vocabulary. Two comprehension tests were administered, and "adequate" lexical coverage for the comprehension was defined based on the scores obtained by the majority of learners in the 100% coverage group: 12 correct answers out of 14 on a multiple-choice test (approximately 85.7%) and a score of 70 out of 124 on a

written recall test (approximately 56.5%).

The different coverage recommendations proposed by Laufer, Hu and Nation (2000) correspond to distinct reading scores being the representative of "adequate" comprehension. Therefore, both recommendations could be correct depending on the level of comprehension expected. As the readers go through the adequate comprehension, it leads to successful lexical guessing from the given text with unknown words. Previous studies' results prove that the optimal lexical coverage for individuals leads to successful reading comprehension, which can help one's lexical guessing. Thus, L2 lexical guessing needs to be further discussed in the factors which influence lexical guessing and its relationship with L1 of the learner.

2.3 L2 Lexical Guessing

2.3.1 Factors Influencing Lexical Guessing

Lexical guessing, the process of using available linguistic and other cues to guess the meaning of an unfamiliar word, has been found to be the primary strategy used by L2 readers in comprehending unknown words in context (Paribakht, & Wesche, 1997; Fraser, 1999). High correlations between inferencing success and reading comprehension, vocabulary knowledge, and reading skill have been reported in research (Hafner, 1967;

Herman, Anderson, Pearson, & Nagy, 1987). Therefore, understanding the factors involved in lexical inferencing that contribute to its success and subsequent vocabulary acquisition is essential in SLA (Second Language Acquisition) research. Other factors that affect learners' inferencing behavior and outcomes have also been highlighted, including the availability of clear contextual cues (Dubin & Olshtain, 1993). Research has shown that various factors may mediate learners' inferencing attempts and the knowledge sources they use, such as the task, previous L2 learning experience, and L1 transfer (Paribakht & Wesche, 1997, 1999).

L2 vocabulary knowledge is a crucial factor in determining one's ability to make inferences. Multiple studies indicate a positive relationship between word knowledge and L2 lexical inference (Haastруп, 1991; Wang and Wan, 2011). Wang and Wan (2011) found a positive correlation between the level of word knowledge and inferencing outcomes. However, they also noted that when learners read specific types of texts, there exists a limit for word knowledge. If learners reach a certain level of word knowledge, their ability to make lexical inferences is not limited. Conversely, insufficient word knowledge may impede guessing the meaning of unknown words.

Another important factor in lexical guessing is the connection between linguistic knowledge and lexical inference in the L2 context. Park (2004) conducted a systematic investigation of this relationship among Korean-speaking English language learners, finding a notable correlation between morphological awareness and inferencing outcomes.

Zhang and Koda (2012) examined the contributions of morphological awareness and lexical inference to reading comprehension among advanced English learners. They discovered that morphological awareness indirectly influenced comprehension rather than making a direct contribution. The study proved that morphological awareness was associated with inferencing capacity in proficient learners, whereas no significant contribution was observed among less-skilled learners. According to Koda (2000), morphological awareness encompasses the ability to segment morphological structures and comprehend morphemic meanings. Zhang and Koda (2018b) redefined morphological awareness as a combination of structural awareness and functional awareness. Structural awareness refers to understanding the regularity in the structure of morphologically complex words, while functional awareness involves retrieving the graphs of semantic meanings from complex words.

Furthermore, various studies have examined the process of inferring and acquiring word meanings from context in L2 learners (Fraser, 1999; Haastrup, 1991; Nassaji, 2003, 2004; Wesche & Paribakht, 2010). These studies have identified multiple knowledge sources that learners utilize during the inference process, such as linguistic, sentence-level, discourse-level, and non-linguistic knowledge (Haastrup, 1991; Wesche & Paribakht, 2010). Researchers have pinpointed several strategies that readers employ when inferring unknown words, including word-part identification, repetition, self-inquiry, evaluation, monitoring, and analogy (Nassaji, 2003). Several studies have also

explored the relationship between inferential strategies and word learning or retention (Laufer, 2003; Nassaji, 2003; Pulido, 2009). However, the connection between the two is not straightforward and depends on various factors, as evidenced by Pulido's (2009) finding that L2 learners performed better when guessing the meaning of words while reading familiar texts than when reading less familiar ones.

De Bot, Paribakht, and Wesche (1997) conducted a study involving 10 intermediate ESL learners in Quebec, using verbal protocols to identify eight knowledge sources used in inferring meanings of unknown words. These sources included sentence-level grammar, word morphology, punctuation, world knowledge, discourse and text, homonymy, word associations, and cognates. The findings indicated that the participants primarily focused on content words, such as nouns, verbs, and adjectives, while disregarding about half of the assumed unknown words.

In a subsequent study, Paribakht and Wesche (1999) explored the strategies and types of knowledge and information used by readers to handle new L2 words encountered during reading. The study involved 10 intermediate-level students from a university ESL class with diverse L1 backgrounds, including Chinese, French, Spanish, Vietnamese, Farsi, and Arabic. The results demonstrated that participants employed various strategies to infer word meanings from different clues, such as synonyms and collocations. Sentence-level grammatical knowledge was predominantly utilized in lexical inferencing.

More recently, Hu and Nassaji (2014) conducted a study involving 11 Chinese ESL learners to explore inferential strategies and their relationship with success. Through qualitative and quantitative analysis, they identified differences between successful and less successful inferences. These differences not only related to the degree to which participants employed certain strategies but also to the timing and effectiveness of their usage.

One notable finding of the existing body of research on L2 lexical guessing is that L2 readers do not consistently attempt to guess the meaning of unfamiliar words, particularly if they perceive those words as less crucial for overall text comprehension (Bensoussan & Laufer, 1984). Moreover, even when attempts are made, the success of generating accurate guesses varies considerably (Haastrup, 1991; Paribakht & Wesche, 1999). Generally, readers rely heavily on meaning cues embedded within the word itself or in the immediate context, especially within the same sentence (de Bot, Paribakht & Wesche, 1997), mirroring similar processes observed in lexical inferencing within L1 literature (Cain et al., 2003).

While it is reasonable to assume that a significant portion of L2 vocabulary learning occurs incidentally through encountering unfamiliar words in context (Gass, 1999), there are divergent views on this matter. The efficacy of incidental vocabulary learning and lexical inferencing in L2 through reading remains an ongoing area of investigation (Wesche & Paribakht, 2010). Studies have demonstrated considerable

variation in the ability of L2 learners to infer the meaning of unfamiliar words from text, even when contextual support is present (Bensoussan & Laufer, 1984; Haynes, 1993; Huckin & Bloch, 1993; Pulido, 2007).

Vocabulary knowledge in the L2 language is a crucial factor influencing the ability of L2 learners to infer word meanings from written context. Various approaches have been employed to investigate this construct, such as comparing learners at different levels of L2 acquisition (Haastrup, 1991) or examining the impact of individual differences in L2 proficiency on inferencing success (Pulido, 2007). The overall result suggests that as L2 proficiency improves, learners demonstrate enhanced skills in inferring word meanings from context. However, proficiency is a multifaceted construct including diverse language skills, including vocabulary and morphosyntactic knowledge (Lesaux & Kieffer, 2010), as well as word reading fluency (Seipel, 2011). While existing research has primarily focused on vocabulary knowledge in the L2, there is limited understanding regarding the potential role of other components of L2 proficiency in predicting lexical inferencing from text.

The significance of existing vocabulary knowledge in the L2 language in facilitating successful lexical inferencing has been supported by Haynes and Baker (1993) as well, who found a stronger correlation between the ability of native Chinese speakers to guess the meaning of new words in English (their L2) and their English vocabulary knowledge rather than their grammatical knowledge. Likewise, Nassaji

(2004) reported that the depth of vocabulary knowledge in the L2 significantly predicted the success of ESL learners in making lexical inferences.

While the L1 literature has incorporated the role of word-level reading in lexical guessing, its systematic exploration in L2 studies has been limited. Perfetti's (2007) model of automatization in reading suggests that efficient processing of individual words allows for the allocation of cognitive resources to higher-level comprehension, resulting in improved reading comprehension. Building upon this result, similar processes may be the foundation of the ability to infer the meaning of unfamiliar words from text in the L2 context. Specifically, proficient recognition of printed words can enable L2 readers to allocate more cognitive resources to higher-level processing and successfully infer the meaning of unknown words. Although previous research has established connections between language proficiency, reading comprehension, vocabulary knowledge, and L2 lexical inferencing (Haynes & Baker, 1993; Nassaji, 2004; Pulido, 2007), the contribution of fundamental reading skills, such as word decoding accuracy and fluency, to L2 lexical inferencing has not been examined to date.

It has been widely studied that through lexical guessing, learners can learn vocabulary incidentally through exposure to unknown vocabulary. However, there are some limits for learners to effect incidental vocabulary learning. Firstly, L2 learners may have fewer opportunities to encounter the target words (TWs) compared to L1 learners (Horst, Cobb, & Meara, 1998). Incidental learning requires repeated exposure to the

same word in various contexts, and if such exposure is limited, it can weaken the effectiveness of learning word meanings. Secondly, L2 learners may sometimes fail to notice unfamiliar words while reading or choose to ignore them if they do not appear to be relevant to their understanding of the text (Fraser, 1999).

2.3.2 Relationship between L1 and L2 Lexical Guessing

Lexical guessing is an essential component of second language (L2) vocabulary acquisition. It involves inferring the meaning of an unknown word by using contextual clues, such as the surrounding words and the topic of the text. Research has shown that lexical guessing is a crucial strategy for L2 learners to expand their vocabulary knowledge and comprehend texts (Laufer & Rozovski-Roitblat, 2011). However, the ability to guess the meaning of words is not consistent among L2 learners, and individual differences in this skill may depend on various factors. One such factor is the print exposures, print exposure of non-native English speakers in their first language (L1). Previous research has suggested that L1 experiences may influence lexical guessing ability in non-native English speakers (Goh, 2000). Therefore, investigating the effects of L1 experiences on lexical guessing ability can shed light on the factors that contribute to individual differences in L2 vocabulary acquisition. This relates to the purpose of this study to explore how the L1 print exposures of EFL college students affect their ability to guess the meaning of unknown

words in English, which will provide insights for language educators to design more effective vocabulary instruction.

Although there is a significant body of research on second language (L2) lexical guessing, few researchers have explored the influence of learners' native language (L1) on this process. The impact of differences in learners' L1 experience base on their lexical inferencing, the level of success they achieve, and the type and amount of vocabulary knowledge they acquire remains unclear. Studies addressing crosslinguistic issues in L2 lexical processing have examined the effects of varying L1 and L2 orthographies on learners' lexical processing modes, strategies, styles, and choices (Chikamatsu, 1996; Koda, 1989). Other research has investigated the influence of L1 processing experience on L2 awareness (Koda, Takahashi, & Fender, 1998), as well as L1 syntactic transfer effects on L2 lexical inferencing. For instance, Koda (2005) underscores that L1 transfer can affect not only linguistic features but also L2 processing skills. He further suggests that the effects of transfer on processing skills may have long-lasting effects, reading skill components being established in the L1 and then transferred to the L2.

Research on the influence of L1 lexicalization patterns, specifically the existence of lexical equivalents for target words in learners' L1, on L2 lexical processing, acquisition, and use is limited. As studies have explored the broader effects of print exposure, L1 linguistic exposure, it suggests that frequent reading provides individuals with opportunities to enhance their understanding of semantic relations, concepts,

categorization, history, and culture (Scribner & Cole, 1981; West et al., 1993). It evidently shows L1 print exposure on print exposure leads to the readers' vocabulary knowledge on L1 and L2.

Some studies have shown that learners tend to avoid lexical items that have no relations in their L1. For example, Blum and Levenston (1979) found that learners of Hebrew from various linguistic backgrounds avoided words without equivalents in their L1s. Similarly, Swedish-speaking learners of English tended to avoid idiomatic phrasal verbs that lacked Swedish counterparts (Sjöholm, 1998). It has also been stated that even the difference in semantic features between L1 and L2 words makes it more challenging for learners to acquire them. For instance, Chinese L2 learners of English, whose L1 shares semantic similarities with English in the components of motion verbs, outperformed Japanese-speaking learners of English whose L1 lacked such similarities (Yu, 1996a).

Gaining a deeper understanding of how L1 lexicalization influences L2 lexical guessing can provide insights into the challenges and tendencies related to learners' L1 during the inferencing process. It can also reveal the factors that contribute to successful comprehension of texts and subsequent vocabulary development. As an example, when the cultural knowledge encoded in the L1 closely aligns with that of the L2, it can facilitate lexical guessing, the retention of new word meanings, and offer further advantages over time. Additionally, this understanding can help us recognize the specific difficulties that L2 learners from various linguistic backgrounds may face in English reading

comprehension. From an educational perspective, by identifying learning issues arising from disparities in L1 and L2 knowledge bases, the study can offer implications for vocabulary and reading instruction.

CHAPTER 3.

METHODOLOGY

This chapter explains the method used in this study. Section 3.1 presents the research design, Section 3.2 discussing the participants of the study, Section 3.3 explains the instrument and how tasks were selected. In order to investigate the effect of L1 print exposure on lexical guessing of EFL college students, Author Recognition Test, Reading Habits questionnaire, and lexical guessing tasks are employed. Section 3.4 outlines the pilot study, proceeded before the main study and Section 3.5 describes the main study procedure. Data analysis in terms of statistical strategy and data is discussed in Section 3.6.

3.1 Research Design

A 3x2 factorial design was used to collect and analyze the data of Korean EFL college students' L1 print exposure, and lexical guessing tasks with different lexical coverage were practiced to assess lexical guessing abilities. The two independent variables are L1 print exposures (High, Intermediate, Low) and lexical coverage with two levels (95% and 98%). The dependent variable is successful lexical guessing of participants. In this

design, each participant was tested twice, once under each level of the lexical coverage condition (e.g. 95% and 98%).

In this design, participants would be assigned to different levels of the L1 print exposure (High, Intermediate, Low) and exposed to different levels of lexical coverage (95%, 98%). Their performance on the lexical guessing tasks would be measured, and the data would be analyzed to determine the main effects of L1 print exposure and lexical coverage, as well as the interaction effect between the two variables. The results of the lexical guessing task were analyzed, and a two-way repeated measures ANOVA and paired sample t-tests were utilized to evaluate the significance of the differences in L2 lexical guessing scores based on L1 print exposure and lexical coverage.

3.2 Participants

A total of 60 undergraduate and graduate students participated in this study. They were all native speakers of Korean, and their ages ranged from 22 to 35 years. Their gender was not considered as a determining factor. All participants have learned middle and high school curriculum in Korean and have used and learned English as a foreign language. As participants needed to read and guess pseudo-words from the lexical guessing task, the receptive level score is TEPS 550 (standard for College English 1 of Seoul National University, Seoul, South Korea) or other official English assessment scores such as TOEIC,

TOEFL, or IELTS.

Those whose scores in the English Proficiency Tests new TEPS 298 – 452 were considered as the participants of this study. Participants who did not have new TEPS scores were able to replace the scores with other official certified English scores such as TEPS, TOEIC, or TOEFL. The conversion table presented on the TEPS official website and Korea English Language Testing Association, TEPS 551 to 800, TOEIC 775 to 960 and TOEFL 88 to 113 were in the same classification.

All of them had similar English proficiency levels, which are intermediate and upper-intermediate levels, TOEFL, TEPS or TOEIC which correspond to the collected participants of the study. Thus, participants were divided into three levels based on their L1 print exposure scores : Low (n=20) = 9 – 22, Intermediate (n=20) = 23 -35, High (n=20) = 36 to 60. English proficiency levels were similar in all three groups, Low, Intermediate, and High. The average scores were similar when the different English Proficiency Test scores were replaced with TEPS score. For Low group, the average score was 720, the Intermediate group, 698, and the High group with the average score of 734. The number of participants in each groups were kept same in order to effectively compare the groups pairwise. Furthermore, the score range was divided clearly when the groups were divided into three with same numbers. This will be further described in Chapter 4 and Chapter 5, results and discussion.

To control the variable of L1 print exposure, participants who have completed the middle school and high school education in Korea were chosen. This was identified in the notice for gathering the participants. For participants to be aware of this fact once again, they were asked to answer the ‘Yes or No’ question of whether they had attended middle school and high school in Korea. Also, students studying all different fields were selected in order to prevent the effect of background knowledge and topic familiarity.

3.3 Instrument

3.3.1 Author Recognition Test

An Author Recognition Test was used to measure L1 print exposures of participants. The participants will be given a list of 130 L1 (Korean) names, 65 real author names and 65 folios. The Author Recognition Test (ART) adapted the Acheson et al, (2008) version of the test, presenting with a list of 130 potential author names; 65 real author names and 65 folio (non-author) names. In the original ART list developed by Stanovich and West (1989), deliberate efforts were made to include popular authors while excluding more intellectually challenging writers primarily familiar to highly academically oriented reader. In the case of the modified ART used for the current study, the list was developed reflecting the classic and popular authors at the time of study and the age groups of participants. The participants' average age was 28 years. In the current

study, the names were adapted that participants' average age group will be able to acknowledge the real author names in the ART.

An initial list of 250 authors was selected by searching for popular books from one library and four big online bookstores:

1. The 50 most borrowed books from Seoul National University library in 2022;
2. The top 50 bestselling books from Kyobo book in 2022;
3. The top 50 bestselling books from YoungPoong Moonko in 2022;
4. The 50 bestselling books from Aladin in 2022;
5. The 50 bestselling books from Yest 24 for 12 months before March, 2023;
6. “The top 100 Korean authors that Korean students should know” from Chosun Ilbo Newspaper

Out of the 350 authors, names of recent Korean authors who have been mentioned more than 3 times were only included to be in the list of the Author Recognition Test (See Appendix 1). A pilot study was conducted to identify the famous authors that participants of this study could recognize in their age groups. Only Korean authors were chosen for the ART list as unlike in English-speaking countries, where original English written books might fairly well represent readers' reading experiences and print exposure, most readers' reading experiences might be those translated from many other languages. Thus, it was unfeasible to translate names of foreign authors as due to the lack of a uniform system of translating names of foreign authors. Furthermore,

participants may be confused of the names, or confused whether they have read in English, which regards as L2 print exposure.

The names were presented in Korean alphabetical order by last name. The test was administered through Google form and participants were asked to check the names that they recognized as those of authors, but they were warned that their score would be penalized for circling non-authors. To ensure that participants do not use the search engines to figure out whether the names were of existing authors, participants were given limited amount of time, 3 minutes to decide whether the name was a real author name. They were also instructed to select names they were certain of to be real authors. The scores of Author Recognition Test (ART) were calculated by subtracting the total number of nonauthor names that were wrongly identified from the total number of authors which were correctly identified.

3.3.2. Reading Habits Questionnaire

The study examined self-reported reading habits, with participants being asked to complete the questionnaire based on their own reading experiences. Traditionally, earlier studies measured self-reported reading habits by requesting an overall time estimate from respondents. However, this study used a five-point scale ranging from 0 (never) to 5 (frequently) to measure the frequency of reading various materials.

The Reading Habits survey, which was adapted from Scales and Rhee's (2001) study, included six items that aimed to assess participants' reading habits (See Appendix 2). The questions asked participants about their enjoyment of reading, the amount of time they spent reading different types of materials, and their reading preferences. Additionally, participants were asked about the number of books they had read in the past 12 months, which was not included in the original Scales and Rhee survey. To measure participants' reading frequency and print exposure, the study used Survey Q1, Survey Q3, and Survey Q4. Survey Q1 asked participants how often they read on a five-point scale, and Survey Q4 asked about the number of books they had read in the previous year using a six-point scale (1 = 0 books, 2 = 1-9 books, 3 = 10-19 books, 4 = 20-29 books, 5 = 30-49 books, 6 = more than 50 books) (Scales & Rhee, 2001; adapted by the present study). While Survey Q1 and Q4 asked about the amount and frequency of reading of participants, Survey Q3 asked the participants' reading attitude on a five-point scale. Several questions which were not used in data analysis was included in order to prevent participants to answer the questionnaire through biased social standards, one of the limitations of self-reported questionnaires. As the participants were not aware of which questions will be analyzed, they were able to answer without any pressure.

The measurement of lifetime exposure to print in Wimmer and Ferguson's study (2023) drew upon three approaches: the Author Recognition Test-Genres (ART-G) scores (Mar & Rain, 2015), book counting, and self-reported reading frequencies. By utilizing

these three measures, the study sought to establish the relationship between them and uncover the participants' lifetime exposure to print. This approach aligns with previous research by Spear-Swerling et al. (2010), which demonstrated a significant correlation between ART performance and self-reported reading habits across various genres. The findings of this prior study underscore the importance of incorporating both ART scores and reading habits in measuring print exposure. Building upon these earlier investigations, the current study employed both the ART and Reading Habits Questionnaire scores to examine the impact of L1 print exposure on L2 lexical guessing.

3.3.3 L2 Lexical Guessing Task

The International English Language Testing System (IELTS) is a widely used measure of English language proficiency, and it has been validated for use in various contexts, including academic settings (Cortina & Holland, 2013). Previous research has also shown that IELTS scores are positively correlated with academic success, including academic reading performance (e.g., Luoma, Kohtamäki, & Palonen, 2016). Overall, using IELTS reading passages to measure participants' L2 lexical guessing ability is a valid approach, and it has been used in previous research to investigate similar questions in the case of reading proficiency (e.g., Luoma et al., 2016).

The length of the two expository texts were chosen to be similar word counts.

Table 3.1 displays the overall characteristics of two texts. Each passage consists of 233 words and 236 words. Both texts were related to topics that all participants are familiar with to discard the effect of background knowledge on lexical guessing.

Except for the target vocabulary, the difficult words chosen from the pilot study by seven university students were given with definition as a separate list during the lexical guessing task (see Appendix 3).

TABLE 3.1.
Descriptive Information of Two Texts Used in
L2 Lexical Guessing Tasks

Title	The Life and Work of Marie Curie	Robots At Work
Number of Words in the Passage	233	236
Lexical Coverage	95%	98%
Number of Target Words	12	5
List of Target Words	famous, awarded, first, prodigious, completion, lost, finance, education, fulfilled. began, examination, introduced	printed, prevails, minority, electronically, sophisticated

The lexical coverage of the given text, the two texts excerpted from IELTS

practice test page, will be controlled as 95%, and 98%. The two passages excerpted were “The Life and Work of Marie Curie” and “Robots at Work”. To prevent participants from having prior knowledge of the target words, they were replaced with pseudo-words. Pseudo-words, according to Pulido, is “an invented word constructed according to the orthographic and morphological rules of the target language (2007)” By using the pseudo-words, it was ensured that the participants would not know the target words before reading the text.

The target words were specifically emphasized by bold highlighting and underlining. Pseudo-words were given as the experiment aimed to ascertain the ability of EFL college students to accurately infer the meanings of the target words under different conditions. To measure lexical guessing through reading successfully, the pseudo-word method was adopted rather than the real-word approach.

To ensure that the target words used in the study were appropriate and comparable between two passages, a set of criteria was followed which was recommended by Schmitt (2010). Firstly, words that appeared only once in the passages were selected to control for frequency effects. Secondly, the ratio of content words was balanced across the two passages, with similar numbers nouns, verbs, and adjectives selected from each passage. The method used to select the target words ensured their unfamiliarity and equivalent difficulty between the participants with different L1 print exposures. The reliability coefficient of the two texts with different lexical coverage 95% and 98%, were

each 0.73 and 0.70.

3.4 Pilot Study

Before the main experiment, pilot research was carried out to check popular and classic Korean authors in order to adjust the Author Recognition Test (ART), which relates to the age group of this study. Seven university students were sampled for the pilot test to ensure the similarity of the pilot sample to the main study. The pilot study was conducted using the same procedure as the main experiment. However, while the main experiment was done online through Google Form, the pilot study was conducted using paper, with participants writing on the paper. The modified version of the Author Recognition Test's author names was pilot-tested, and the final lists were formed by deleting the items that were least often correctly identified.

Another pilot study was conducted for the lexical guessing task. It was conducted to measure the learners' prior vocabulary knowledge of the given text and to determine the appropriateness of reading materials for the lexical guessing task. Participants were instructed to circle the words for which they did not know the definition. The list of words that participants circled the most formed the word list given to the participants of the main experiment before completing the lexical guessing task. To control for the variable of topic familiarity, participants in the pilot study identified whether the topic of the lexical

guessing task was familiar or not

3.5 Main Study Procedure

This study was conducted in one session with students' voluntary participation. During the session, students were first informed about the purpose of the study and completed the informed consent. After providing the informed consent, participants completed the L1 print exposure task for 5 minutes. The L1 print exposure task included Author Recognition Test and Reading Habits Questionnaire. As the subsequent session, two lexical guessing tasks dealing with 95% and 98% lexical coverage were completed in 20 minutes (See Table 3.2).

TABLE 3.2.

The Summary of the Research Procedure

Procedure	Tasks	Time Length
Pilot Study	Author Recognition Test	5 minutes
	L2 Lexical Guessing Tasks	15 minutes
Main Study	L1 Print Exposure Tasks	5 minutes
	L2 Lexical Guessing Tasks	20 minutes

First, participants responded to the Author Recognition test and Reading Habits Questionnaire (refer to Appendix 1 and 2). This part of the experiment was conducted using Google Forms as the researcher provided a link to the participants. Participants were divided into three levels based on their L1 print exposure scores: High, Intermediate, and Low.

After completing the first part of the task, students recorded their official English Proficiency scores. For the final part of the experiment, students were given two lexical guessing tasks with 2 passages that had been excerpted from the International English Language Testing System (IELTS). One passage had 95% lexical coverage, and the other passage had 98% lexical coverage. Students were informed that they would have to guess the definitions of pseudo words in either Korean or English. Within the experiment, participants were required to guess the meanings of twelve and five nonsensical words in the two passages.

Participants were tasked with determining the meanings or translations of target words, which were underlined pseudo words, to assess their ability to infer the meanings of unfamiliar target words (see Appendix 3). Clear instructions were provided to the participants to either write the meaning of the target words in Korean or English. The participants were allowed to leave the answer blank if they were unable to guess the meaning at all. The instructions were presented in written form.

3.6 Data Analysis

This section explains the scoring procedures and data analyses of the research. The analyses for the present study were conducted using IBM SPSS Statistics (Version 28). Two-Way repeated measures ANOVA test was performed to examine whether L1 print exposures control the lexical guessing scores at different lexical coverage levels. Additionally, to examine the effects of L1 print exposure and lexical coverage on L2 lexical guessing scores of EFL college students, Tukey post-hoc test was administered in order to see the difference in pairwise comparisons.

The data obtained from the L1 print exposure questionnaires and lexical guessing tasks were examined quantitatively across the levels of print exposure. To assess how participants chose the names of real authors, the rubric for the Author Recognition Test (ART) adapted by Acheson et al. (2008) was used.

In the subsequent part of the study, the lexical guessing tasks were evaluated using Nassaji's (2003) 3-point scale. A score of two was given if the answer was semantically, syntactically, and contextually appropriate. One point was given for guessing that was only partly correct but made sense in the context. Guessing that did not

make sense in the context was considered incorrect and received 0 points.

Example 1 :

This is the situation which now blivvers in Sydney. The daily paper is compiled at the editorial ...

For instance, the answer for the pseudo-word 'blivvers' is 'prevail (see Example 1). Participants who have answered as 'prevalent' have received 2 points for the question. Participants who have answered 'happen' or 'occur' received 1 point as the score for the following question. If the answer was completely incorrect and did not fit into the context of the sentence, the participant received 0 point.

CHAPTER 4.

RESULTS

Chapter 4 provides a comprehensive analysis of the research data, offering insights into each of the research questions. Section 4.1 delves into the findings derived from the questionnaires administered to participants: the Author Recognition Test (ART) and the Reading Habits questionnaire. Furthermore, scores of L1 print exposure and L2 lexical guessing scores are displayed. In Section 4.2, effects of the two independent variables, L1 print exposure and lexical coverage, on L2 lexical guessing is discussed. The two-way repeated measures ANOVA, pairwise comparison and post-hoc test results highlight the importance of considering L1 print exposure and reading habits, as well as the impact of different levels of lexical coverage, in enhancing lexical guessing skills.

4.1 Performance of L1 Print Exposure and L2 Lexical Guessing

The results of the Author Recognition Test and Reading Habits Questionnaire are summarized in Table 4.1. It shows the means, standard deviations, and the number of participants.

TABLE 4.1.

Descriptive Statistics for L1 Print exposure

L1 Print Exposure	N	Mean	S.D
High	20	41.65	5.896
Intermediate	20	29.6	4.429
Low	20	16.3	3.180

Table 4.1 displays the added scores of ART and Reading Habit scores. It identifies the mean scores of L1 print exposure of participants, which have been divided into three groups: High, Intermediate, and Low. As mentioned in previous studies, the significant correlation between ART performance and self-reported reading habits across various genres provide the evidence for the current study in data analysis of L1 print exposure.

This finding underscores the need to consider multiple variables and factors that influence lexical guessing ability, beyond just L1 print exposure and reading habits. Thus, examining each individual factor seems effective in finding out the main effects on lexical guessing of different lexical coverage.

The following tables, Table 4.2 and Table 4.3, present the descriptive data of the total scores of L2 lexical guessing scores and L2 lexical guessing scores across two conditions: 95% lexical coverage and 98% lexical coverage.

TABLE 4.2.
Results of the L2 Lexical Guessing Scores
by the Three Print Exposure Groups

L1 Print Exposure	N	Total Score	Mean	S.D.	<i>F</i>	<i>p</i>	Post-hoc
High ¹	20	34	26.7	4.691			
Intermediate ²	20	34	23.7	5.391	5.269	.031*	1 > 3
Low ³	20	34	22.2	5.845			

Note. Significant level: * $p < 0.05$

TABLE 4.3.
Tukey Test Results for Pairwise Comparison of L1 Print
Exposure Groups on L2 Lexical Guessing

L2 Lexical Guessing		Mean Difference	S.E	<i>p</i>
High	Intermediate	3	1.685	0.186
	Low	4.500*	1.685	0.026
Intermediate	High	-3	1.685	0.186
	Low	1.5	1.685	0.649
Low	High	-4.500*	1.685	0.026
	Intermediate	-1.5	1.685	0.649

Note. Significant level: * $p < 0.05$

Table 4.2 shows the descriptive statistics for three groups' lexical guessing. Participants of the study completed the ART and RH questionnaires and with the both scores added, participants were divided into three groups to study the effect of L1 print exposure having effect on L2 lexical guessing. The three groups were formed as following: Low group (L1 print exposure score range 9 to 22), Intermediate group (23 to 35) and High group (36 to 60). The L2 lexical guessing scores of two different lexical coverage tasks (95% and 98%) were added to examine the effect of L1 print exposure on L2 lexical guessing.

Based on the given statistical results, it can be interpreted that there is effect of L1 print exposure on overall L2 lexical guessing performance. According to Table 4.3, it shows apparent difference in the means of L2 lexical guessing scores of three different groups divided according to L1 print exposures. The results indicate that participants' level of L1 print exposure plays a role in their overall L2 lexical guessing performance. Specifically, participants with a higher level of L1 print exposure tend to have better lexical guessing abilities compared to those with intermediate or low levels of experience. This finding supports that individual variations in L1 abilities result in similar differences in L2 learning (Sparks, 2012; Sparks, Patton, Ganschow, Humbach, & Javorsky, 2006, 2008), proposing L1 print exposure has significant effect on L2 lexical guessing.

The Tukey post-hoc test was conducted to explore the pairwise comparisons between the three groups based on L1 print exposure (High, Intermediate, Low) in terms

of their L2 lexical guessing abilities (see Table 4.3). The results provide valuable insights into the overall lexical guessing performance and highlight the significance of L1 print exposure in this context.

Comparing the High and Intermediate groups, the mean difference was found to be 3, although this difference was not statistically significant ($p = 0.186$). This suggests that there is no substantial difference in lexical guessing abilities between these two groups. Similarly, when comparing the Intermediate and Low groups, the mean difference was -3, which was not statistically significant ($p = 0.186$). This indicates that the L1 print exposure did not significantly affect the lexical guessing performance between these two groups.

However, the comparison between the High and Low groups revealed a significant mean difference of 4.500 ($p = 0.026$). This indicates that the L1 print exposure has a significant impact on the lexical guessing abilities between these groups. The High group, characterized by a higher level of L1 print exposure, performed better in lexical guessing tasks compared to the Low group. This finding emphasizes the importance of a strong L1 linguistic foundation in enhancing L2 lexical guessing abilities.

The Tukey test also indicated that there was no significant difference between the Intermediate and Low groups, with a mean difference of 1.5 ($p = 0.649$). This suggests that the L1 print exposure did not have a substantial impact on the lexical guessing performance between these two groups.

Overall, these findings demonstrate that while the differences between the High and Intermediate groups, as well as between the Intermediate and Low groups, were not significant, the difference between the High and Low groups was significant. This implies that L1 print exposure plays a vital role in shaping L2 lexical guessing abilities. Educators and language practitioners can leverage this understanding to design targeted interventions and strategies that focus on strengthening students' L1 linguistic foundations to improve their lexical guessing skills in the target language.

4.2. Effects of Different L1 Print Exposure and Lexical Coverage

The two-way repeated measures ANOVA intended to statistically analyze the relationship between two independent variables: L1 print exposure (high, intermediate, low) and lexical coverage of English texts (95% and 98%). Table 4.5 examines the Tukey post-hoc test results for the L1 print exposure and two different lexical coverage effects by comparing the significance of the difference in L2 lexical guessing scores. Finally, the analysis involved two-way repeated measures ANOVA (see Table 4.6). Further discussion will be presented in Chapter 5 to address the main effects of lexical coverage and L1 print exposure.

TABLE 4.4.

**Results of L2 Lexical Guessing Scores with Different Lexical
Coverage by the Three Print Exposure Groups**

Lexical Coverage	L1 Print Exposure	N	Mean	S.D.	<i>F</i>	<i>p</i>	Post-hoc
98%	High ¹	20	81.25	14.961	1.349	.268	
	Intermediate ²	20	75.41	17.094			
	Low ³	20	72.70	18.160			
95%	High ¹	20	72	19.894	6.398	.003*	1 > 3
	Intermediate ²	20	56	23.360			
	Low ³	20	47.50	22.681			

Note. Significant level: * $p < 0.05$

TABLE 4.5.**Tukey Test Results for the L1 Print Exposure and
Different Lexical Coverage Effects**

Lexical Coverage (I)	L1 Linguistic Experience (J)		Mean Difference (I-J)	Std. Error	p	
98%	High	Intermediate	5.83	5.310	0.519	
		Low	8.535	5.310	0.251	
	Intermediate	High	-5.83	5.310	0.519	
		Low	2.705	5.310	0.867	
	Low	High	-8.535	5.310	0.251	
		Intermediate	-2.705	5.310	0.867	
	95%	High	Intermediate	16	5.310	0.064
			Low	24.500*	5.310	0.002
Intermediate		High	-16	5.310	0.064	
		Low	8.5	5.310	0.445	
Low		High	-24.500*	5.310	0.002	
		Intermediate	-8.5	5.310	0.445	

Note. Significant level: * $p < 0.05$

Table 4.4. displays the total results which was conducted aimed to examine the relationship between two levels of lexical coverage (LC): 98% and 95%, according to L1 print exposure performance of participants. Upon examining the descriptive statistics, since each score had a different total score, 24 points for 95% lexical coverage on lexical

guessing and 10 points for 98% lexical coverage on lexical guessing, the total score of both tasks were converted to 100 points for easier understanding.

It is observed that the High L1 print exposure performance group achieved the highest average scores across both levels (95% and 98%) of lexical coverage. The Intermediate group obtained an average considerably lower than the High group. Lastly, the Low group achieved the lowest average scores. These findings suggest that the High group performed the best, followed by the Intermediate group, while the Low group had the lowest performance in the task.

The Tukey post-hoc test results in the Table 4.5 provide insights into the effects of high lexical coverage and L1 linguistic experience on lexical guessing performance. When examining the results for Lexical Coverage at 98%, the mean differences between the groups (High, Intermediate, and Low) are relatively small and not statistically significant. This suggests that the level of lexical coverage at 98% does not have a significant impact on the participants' lexical guessing abilities. It implies that even with a relatively lower lexical coverage, participants can still perform reasonably well in guessing the meaning of unknown words.

However, when analyzing the results for Lexical Coverage at 95%, a different pattern emerges. The mean difference between the High and Low L1 linguistic experience groups is statistically significant, indicating that participants with a higher level of L1

linguistic experience perform significantly better in lexical guessing tasks when exposed to 95% lexical coverage. This finding suggests that a strong foundation in the participants' print exposure in first language can positively influence their ability to guess the meanings of unknown words in the second language.

TABLE 4.6.

A Summary of the Two-Way Repeated Measures ANOVA on Lexical Guessing

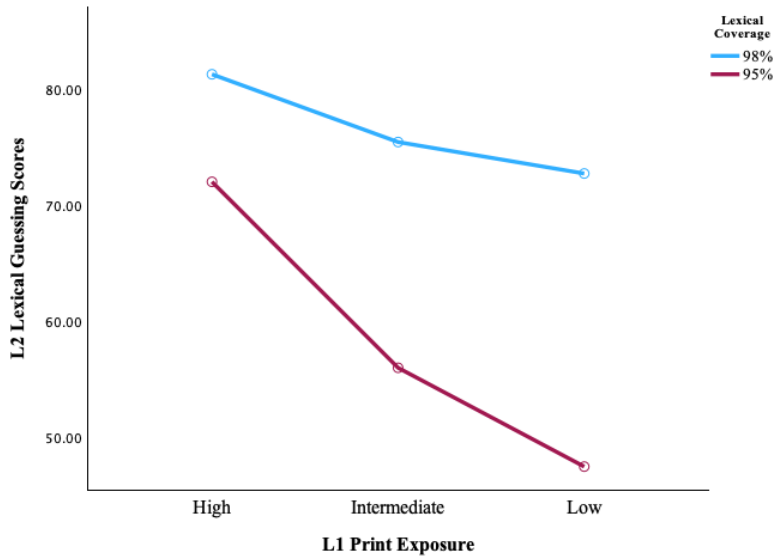
Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>Partial η²</i>
Within-Subjects						
L1 Print Exposure	5644.707	2	2822.354	5.269*	.008	0.156
Error	30531.454	57	535.640			
L1 * LC	1306.307	2	653.154	2.838	0.067	0.091
Error	43648.208	114	382.879			
Between-Subjects						
Lexical Coverage	9678.644	1	9678.644	42.059**	.000	0.425
Error	13116.754	57	230.118			

Note. Significant level: * $p < 0.05$, ** $p < 0.001$; L1 = L1 Print exposure; LC = Lexical Coverage

The two-way repeated measures ANOVA results demonstrate the significant effects of L1 print exposure and lexical coverage on lexical guessing abilities (see Table 4.6). Learners' L1 language experience and the proportion of known words in the text are important factors influencing their ability to infer the meanings of unknown words. The interaction effect suggests that the relationship between L1 print exposure and lexical guessing ability may depend on the level of lexical coverage.

Based on the findings presented in Table 4.6, there was no observed interaction effect between L1 print exposure and lexical coverage of L2 English texts ($F(2, 114) = 2.838, p = .067$). However, when examining each factor individually, there were significant main effects.

Figure 4.1.
Effects of L1 Print Exposure and Lexical Coverage
on L2 Lexical Guessing



The significance of L1 linguistic experience in relation to lexical guessing ability highlights the importance of vocabulary knowledge and comprehension skills developed in one's native language. A solid foundation in the first language provides learners with a broader range of vocabulary and language skills that can be transferred to the second language. Therefore, students with a higher level of L1 linguistic experience may possess better word recognition, semantic knowledge, and context-building abilities, enabling them to make more accurate guesses in the lexical guessing tasks.

It is worth noting that the low lexical coverage (95%) results in a greater difference in performance between the High and Low L1 linguistic experience groups compared to the higher coverage (98%). This suggests that a higher level of lexical coverage leads to better performance for all L1 print exposure groups, underscoring the importance of high lexical coverage and increased vocabulary knowledge. Also, it finds the significance of both lexical coverage and strong L1 print exposure in facilitating lexical guessing skills of EFL college students.

CHAPTER 5.

DISCUSSION

In this chapter, the key findings of the study are presented in relation to each of the three research questions. Additionally, the results of the current study are compared to previous research to provide a comprehensive discussion. The aim of this study was to examine how L1 print exposure and lexical coverage impact L2 lexical guessing scores. To address this objective, Section 5.1 and 5.2 explore the influence of L1 print exposure and lexical coverage, respectively, on L2 lexical guessing. Furthermore, Section 5.3 delves into the interaction between the two variables - L1 print exposure and lexical coverage - and their combined effect on L2 lexical guessing.

5.1 Effects of L1 Print Exposure on L2 Lexical Guessing

In order to find out the effects of L1 print exposure on L2 lexical guessing, L1 print exposure was studied by two measurements: Author Recognition Test and Reading Habits Questionnaire. The results of L1 print exposure of 60 EFL college students answer to the first research question, “What are the L1 print exposures of EFL college students in intermediate and upper-intermediate level of English proficiency?”. As the participants

were divided into three groups to have same numbers in each group, the mean scores showed significant difference. The mean scores and standard deviations (see Table 4.1) offer a summary of the participants' reported print exposure, which sheds light on the varying degrees of print exposure within each group. The findings from this descriptive analysis highlight the importance of considering L1 print exposure as a significant factor in second language acquisition. The varying levels of exposure reported by participants suggest that differences in print engagement can influence language development and reading abilities. Individuals with higher L1 print exposure may have a stronger foundation in reading skills and vocabulary knowledge, potentially leading to more successful lexical guessing in the L2 context. Conversely, individuals with lower L1 print exposure may face challenges in developing these language competencies.

The main effect of L1 print exposure was also significant as shown in Table 4.5 ($F(1, 57) = 5.269, p = .008$). This indicates that the level of L1 print exposure significantly influences lexical guessing performance. This result provides partial answer to the second research question, "How does L1 print exposure and lexical coverage independently affect the L2 lexical guessing scores?".

The Tukey post-hoc test results demonstrate a significant difference in L2 lexical guessing scores between participants with high and low L1 print exposure in 95% lexical coverage. The results indicate the disparity between High and Low L1 print exposure groups was found to be significant in low, 95% lexical coverage ($p = .002$), while no

statistical significance was observed in 98% lexical coverage ($p = .251$).

Specifically, participants with high L1 print exposure scored significantly higher when exposed to 98% lexical coverage compared to 95% lexical coverage. These findings suggest that participants with a high L1 print exposure performed significantly better in L2 lexical guessing compared to those with a low L1 print exposure when lexical coverage was held constant at 98%. The analysis revealed a significant effect of L1 print exposure on L2 lexical guessing performance when the lexical coverage was held at 95%. Participants with a high L1 print exposure outperformed those with a low L1 print exposure when the lexical coverage was lower. This leads to the conclusion that lower the lexical coverage is for L2 lexical guessing, the more effect of L1 print exposure is shown for participants on the lexical guessing scores. These findings highlight the influence of L1 print exposure and the interaction between L1 print exposure and lexical coverage on L2 lexical guessing abilities.

The second question address the main effects of L1 print exposure (controlled as High, Intermediate, and Low) on L2 lexical guessing. Higher levels of L1 print exposure may provide a cognitive foundation for improved text comprehension. Put simply, when L2 learners have higher levels of L1 print exposure, it aids their ability to guess the meaning of unknown words. The overall findings align with previous research that L1 proficiency has a notable impact on L2 learning outcomes (Cummins, 1979, 1991, 2000). According to Cummins' hypothesis, both L1 and L2 language learning facilitates the

transfer of L1 skills, such as phonological-orthographic, syntactic, and semantic processing, to L2 development. L1 print exposure likely helped participants of the study to develop a process of which L1 print exposure has impact on L2 reading and lexical guessing. Guessing the meanings of unknown words was more plausible when L1 print exposure is high compared to low in higher lexical coverage conditions. Thus, in this study, L1 print exposure emerged as a reliable predictor of L2 lexical guessing when the text has high lexical coverage.

This outcome can be attributed to the relationship between L1 print exposure and L2 lexical guessing. Learners' prior knowledge of L1 linguistic influences their ability to make better guesses. These results align with previous studies (e.g. Grabe, 2004; Nassaji, 2002). Linguistic knowledge and experience in printed materials combines with guessing ability when the text is provided in high lexical coverage for the readers. Successful guessing relies on high L1 print exposure where L2 readers may utilize their L1 print exposure with printed materials and the surrounding linguistic information helps trigger plausible meanings for unknown words.

5.2 Effects of Lexical Coverage on L2 Lexical Guessing

The main effect of lexical coverage was found to be significant as well ($F(2, 57)$)

= 42.059, $p = <.001$) (see Table 4.6). The p-value shows there are significant differences in lexical guessing performance among participants with different levels of lexical coverage. The result suggests that lexical coverage explains approximately 42.5% of the variance in lexical guessing scores. The results of Table 4.6 answers to the second research question, “How does L1 print exposure and lexical coverage independently affect the L2 lexical guessing scores?”.

As the study aimed to examine the impact of lexical coverage, controlled at 98% and 95%) on L2 lexical guessing, the results from the Tukey post-hoc test revealed significant main effects of lexical coverage on lexical guessing for learners with different L1 print exposure (see Table 4.5). While the effect was less significant for participants with higher lexical coverage (98%), it was pronounced and significant for participants with low lexical coverage (95%). This finding indicates that increasing the lexical coverage improves the accuracy of guessing the meaning of target words. Furthermore, the results state that lower lexical coverage is more influential to the mean difference in L2 lexical guessing scores. These results highlight the importance of considering lexical coverage as well as the L1 print exposure of EFL learners when the lexical coverage is comparatively low. It underscores the crucial role that lexical coverage plays in the process of lexical guessing.

5.3. Interaction Effect between Lexical Coverage and L1 Print Exposure on L2 Lexical Guessing

Rather than simply investigating the influence of lexical coverage on L2 lexical guessing, this study specifically explored whether there are any meaningful distinctions between 95% and 98% lexical coverage in terms of L2 lexical guessing abilities of EFL college students. When encountering English texts with high lexical coverage, learners exhibited greater accuracy in guessing the meaning of unknown words. Furthermore, as the difference only existed significantly for Low L1 print exposure group, it states how readers with low L1 print exposure show greater difference in L2 lexical guessing scores with different lexical coverage.

Overall, the pairwise comparison and post-hoc test results provide valuable insights into the effects of L1 print exposure on L2 lexical guessing abilities. The results suggest that participants with high L1 print exposure benefit from higher levels of lexical coverage, resulting in improved lexical guessing performance. On the other hand, participants with low L1 print exposure may struggle more with lexical guessing tasks, particularly when exposed to lower levels of lexical coverage. These findings highlight the importance of both L1 print exposure and lexical coverage in shaping L2 lexical guessing abilities.

Based on these results, it can be concluded that there is an influence between the

level of L1 print exposure, and lexical coverage on participants' L2 lexical guessing performance independently. However, the significant interaction effect between L1 print exposure and lexical coverage did not exist. This answers to the third research question, "Does the interaction effect between lexical coverage and L1 print exposure on Korean EFL college students' L2 lexical guessing exist?".

This study highlights the crucial role of L1 print exposure and the benefits of high lexical coverage (leading to higher vocabulary knowledge) in enhancing lexical guessing performance. It demonstrates that students with a strong foundation in their first language are better equipped to guess the meanings of unknown words, particularly when exposed to a wider range of vocabulary in the second language. These findings emphasize the importance of considering L1 print exposure and providing ample exposure to high lexical coverage in the language learning environment to foster effective lexical guessing skills in EFL college students.

The findings also emphasized the importance of lexical coverage in determining participants' performance in inferring word meanings. Higher levels of lexical coverage provide learners with more contextual cues (Dubin & Olshtain, 1993) and information, facilitating their ability to infer word meanings accurately. On the other hand, lower levels of lexical coverage may pose challenges for learners, resulting in lower performance in the task. It can be stated that the influence of L1 print exposures and the lexical coverage have independent effects on the L2 lexical guessing ability of EFL college students. This

conclusion indicates that the influence of L1 print exposures and the lexical coverage are independent factors affecting L2 lexical guessing performance of EFL college students.

Additionally, when the interaction effect is not significant, it is necessary to consider other variables that may influence L2 lexical guessing ability. For instance, factors such as age, learning experiences, reading habits, and other variables should be further analyzed to complement and interpret the results.

In summary, even when the interaction effect is not significant, it is still observed that the influence of L1 print exposures and the lexical coverage independently affect L2 lexical guessing ability. The results indicate that both L1 print exposure and the level of lexical coverage play important roles in participants' lexical guessing abilities. Participants who have a high L1 print exposure tend to perform better in L2 lexical guessing tasks when they are exposed to a higher level of lexical coverage. Also, the group with a low level of L1 print exposure demonstrates greater variations in L2 lexical guessing skills depending on the different levels of lexical coverage in the English texts. These findings highlight the complex nature of lexical guessing in a second language context and emphasize the need to consider both L1 print exposure and text characteristics when examining lexical guessing skills.

This outcome derived from the study may be attributed to the relationship between vocabulary knowledge and reading comprehension, which, in turn, impacts the

learners' ability to guess the unknown words. These findings are in alignment with prior studies (e.g. Coady & Huckin, 1999; Laufer, 1997; Nassaji, 2004, 2006). The readers' vocabulary knowledge plays a crucial role in the L2 guessing process of unknown words in a text. If the ratio of known to unknown words is too high, as in the case of 95% lexical coverage, readers and learners may struggle to utilize the contextual clues for determining word meanings.

CHAPTER 6.

CONCLUSION

This chapter consists of three sections. Section 6.1 provides a summary of the key findings of the research, followed by a consideration of pedagogical implications for teachers and students in L2 education in Section 6.2. Finally, Section 6.3 recommends implications for further research including the limitations of the current study.

6.1. Key Findings

This study aimed to examine how the participants' native language (L1) linguistic background and the extent of their vocabulary knowledge (lexical coverage) impact their ability to make educated guesses about unfamiliar words in English. Data from Korean EFL college students were gathered through an Author Recognition Test, a Reading Habits questionnaire, and two lexical guessing tasks. The study focused on addressing three key research questions: 1) What are the L1 print exposures of EFL college students in intermediate and upper-intermediate level of English proficiency? 2) How does L1 print exposure and lexical coverage independently affect the L2 lexical guessing scores? 3) Does the interaction effect between lexical coverage and L1 print exposure on Korean

EFL college students' L2 lexical guessing exist?

These are the primary findings for each question. The first question, “What are the L1 print exposures of EFL college students in intermediate and upper-intermediate level of English proficiency?”, was answered by presenting the participants' L1 print exposure across different levels. As previous research has shown the relationship between Author Recognition Test and Reading Habits questionnaire, the scores of each variables were added and used in two-way repeated measures ANOVA to figure out whether L1 print exposures had effect on L2 lexical guessing of EFL students.

Second question, “How does L1 print exposure and lexical coverage independently affect the L2 lexical guessing scores?” presents whether the L1 print exposure and lexical coverage of English texts had effect on two L2 lexical guessing scores of learners. A significant effect of L1 print exposure scores on L2 lexical guessing was found. Two-way repeated measures ANOVA was conducted to test the L1 print exposures' main effect on Korean EFL college students' overall L2 lexical guessing task performance. The statistical analysis indicated that the learners with higher L1 print exposure performed significantly better on lexical guessing tasks ($p = .008$). Higher L1 print exposure led to the conclusion of higher L1 print exposure having effect on L2 lexical guessing. The answer to the present question seemed to agree with the conclusion of previous studies (Sparks et al, 1997) that experiences in L1 also had significance on L2 learners. These findings suggest that a stronger L1 linguistic background positively influences L2 lexical

guessing abilities. Lexical coverage also showed significant effect on L2 lexical guessing ($p < .001$). This indicates that L1 print exposure and lexical coverage significantly affect the lexical guessing performances of EFL college students.

The last question, “Does the interaction effect between lexical coverage and L1 print exposure on Korean EFL college students’ L2 lexical guessing exist?” was shown from the two-way repeated measures ANOVA. No interaction effect was observed between the two variables (L1 print exposure, lexical coverage), indicating that they did not influence each other.

To summarize, the findings of the current study have demonstrated a connection between participants’ L1 print exposure of print exposure to guess the meaning of words. Additionally, there was a significant effect between lexical coverage and lexical guessing. Considering these results, it is evident that the process of lexical guessing in EFL college students is influenced by their L1 print exposures and the extent of their lexical coverage. Therefore, when providing instruction on lexical guessing, it is crucial to consider the factors such as the participants’ print exposure to their native language and their lexical coverage.

The findings from the study illustrate that relying on context to guess the meaning of words is not always what learners should approach. In essence, even though most participants had a language proficiency level higher than intermediate, accurate guessing

posed a challenge for L2 learners. Guessing unknown words using contextual cues is difficult for L2 learners as it requires precise word recognition and understanding of the surrounding context. Additionally, successful lexical guessing relies on L1 print exposure of the students. Consequently, extensive attention in print exposure of first language, increased frequency of reading, and higher lexical coverage is necessary.

The current study's results have implications for L2 instruction. It provides valuable insights into how Korean EFL learners, who possess different L1 print exposure, engage in the process of lexical guessing. Prior to this study, there was a lack of research specifically investigating the relationship between L1 print exposures and lexical guessing abilities of Korean EFL college students. Thus, this study holds significance as it sheds light on the patterns of lexical guessing exhibited by Korean EFL learners with comparable English proficiency levels. Furthermore, the findings of the study highlight a strong correlation between lexical guessing and both lexical coverage and L1 print exposure with the topic at hand.

6.2. Pedagogical Implication

The findings of the study provide valuable pedagogical guidelines for enhancing lexical guessing among EFL college students by considering their L1 print exposures and lexical coverage. Recognizing the influence of L1 print exposures on lexical guessing

success aligns with the research conducted by Martin-Chang and Gould (2008), emphasizing the importance of incorporating students' L1 knowledge in language learning. By drawing upon their L1 background, learners can make informed guesses based on linguistic similarities and differences, thus enhancing their ability to accurately guess unfamiliar words in EFL contexts (Hasstrup, 1991).

Firstly, the results of the present study highlight the importance of L1 print exposure. The findings show that the students in High L1 print exposure group outperformed those in the Intermediate and Low L1 print exposure groups in L2 lexical guessing, indicating that increased print exposure in L1 can enhance the successful use of the lexical guessing performance. According to Tskhovrebova (2022), learners who have greater exposure to written language may benefit from additional linguistic skills, such as reading or sentence-processing ability, which may compensate for a limited vocabulary when completing the connective task. Even if students do not know all the vocabulary in a text, high L1 print exposure can enhance reading comprehension and lexical guessing. Thus, increasing the L1 print exposure, print exposure can be beneficial, given the strong association between L1 print exposure and L2 lexical guessing.

The significant relationship between L1 print exposure and lexical guessing performance emphasizes the benefits of extensive reading for vocabulary acquisition and reading comprehension. Engaging learners in regular and varied reading activities exposes them to a wide range of vocabulary in different contexts, enabling them to make accurate

guesses based on contextual cues, collocations, and word families (Al Jarf, 2021). Teachers can foster increased print exposure by providing diverse and interesting reading materials, fostering a reading culture in the classroom, and incorporating reading-focused tasks and discussions into the curriculum. These findings support that early L1 skills have great relations to L2 proficiency, especially L1 literacy, and other proficiency in L2 (Sparks et al., 1997), giving evidence to the importance of L1 print exposure.

Secondly, it is crucial for EFL teachers to emphasize the importance of vocabulary knowledge. Sufficient vocabulary knowledge is necessary to effectively utilize the context. Having fewer unknown words provides more cues for guessing. When students encounter texts with a high number of new words, these words can hinder the use of contextual clues, making it more challenging to guess word meanings. This highlights the essential role of vocabulary knowledge. Further suggested by Nation (2006), readers need a large vocabulary size to comprehend the meanings of an English text. Reading comprehension and lexical guessing heavily rely on a learner's vocabulary knowledge.

Therefore, teachers play a crucial role in facilitating vocabulary development and empowering students to make accurate lexical inferences. They can provide graded reading materials to expose learners to target words in diverse contexts, increasing their lexical coverage and comprehension abilities. This aligns with the research by Cipielewski and Stanovich (1992), highlighting the importance of considering different levels of lexical coverage in EFL instruction. By gradually exposing learners to more challenging

vocabulary and scaffolding their guessing abilities through targeted instruction and practice, teachers can enhance students' lexical guessing skills and overall vocabulary development.

The results of this study indicate the importance of incorporating lexical guessing instruction into the EFL/ESL language curriculum. To implement these pedagogical implications effectively, teachers can integrate various instructional strategies. Pre-reading activities can be used to activate learners' prior knowledge, explicit instruction on guessing strategies can be provided, and post-reading discussions can reinforce vocabulary learning. By incorporating these strategies, teachers create a supportive learning environment that fosters students' lexical guessing abilities and promotes their overall language proficiency.

However, it is crucial to carefully control the teaching process to ensure its effectiveness. Many learners initially struggle to recognize and use contextual signals to guess unknown words during reading, leading to incorrect guesses. Therefore, it is recommended to start with low lexical coverage and higher L1 print exposure when practicing lexical guessing. In other words, providing ample known words surrounding difficult words in context can enhance lexical guessing instruction.

Additionally, technology can be leveraged to enhance lexical guessing skills. Online resources, such as corpus-based tools and vocabulary applications, can provide learners with access to authentic language samples and support their understanding of

collocations, word families, and contextual usage (Nassaji, 2006). Integrating technology into classroom activities and encouraging independent use of these tools can further strengthen students' lexical guessing abilities.

It is important to note that the findings should not be interpreted as suggesting that achieving over 95% lexical coverage or high L1 print exposure alone guarantee effective lexical guessing performance of EFL learners. It is crucial to consider additional factors that influence successful lexical guessing. For example, learners' motivation, memory capacity, language proficiency, age, and learning styles have been identified as important variables (Hasstrup, 1991; Nassaji, 2006). Teachers should recognize the multidimensional nature of lexical guessing and address these factors in their instruction.

In conclusion, promoting L1 print exposures of learners and incorporating different levels of lexical coverage are essential for enhancing lexical guessing skills in EFL instruction. By integrating these factors into classroom practices, teachers can empower students to make accurate lexical inferences, facilitate their vocabulary acquisition, and improve their overall reading comprehension skills. Moreover, recognizing the influence of individual learner characteristics and leveraging technology can further enhance the effectiveness of lexical guessing instruction.

6.3. Implication and Limitations for Further Research

This research study has several limitations that necessitate further investigation. Firstly, the limited number of adult participants, totaling only 60, resulted in reduced statistical power and challenges in generalizing the findings to larger populations. Future research with larger and more diverse samples is recommended to validate the current findings. Additionally, it would be valuable to investigate other factors that may interact with lexical coverage and L1 print exposure such as learners' language proficiency or reading strategies, to gain a more comprehensive understanding of lexical guessing abilities.

Secondly, the current study did not consider the nature of the guessing tasks used in the study. The inclusion of real words that participants are unfamiliar with, as opposed to nonsense words, would have provided a more realistic scenario. Real words will offer additional cues which can aid participants in their guessing process. However, the use of nonsense words was necessary to maintain strict control over lexical coverage in the experiment.

It is important to acknowledge that the research instrument used in the study, the Author Recognition Test and Reading Habits Questionnaire may have their own limitations. For example, the Author Recognition Test may not capture the full range of participants' L1 print exposures, and the reading habits questionnaires may rely on self-

report measure that could be subject to biases or inaccuracies. Even though ART and Reading habits questionnaires represented the print exposure of participants in the study, future investigations should take into account these additional factors when measuring L1 print exposures. One possible explanation for the lack of correlation could be the limited scope of the ART and reading habits measures. The ART primarily assesses the ability to recognize authors, focusing on their linguistic patterns and writing styles. On the other hand, reading habits encompass a broader range of behaviors, such as the frequency and duration of reading, exposure to various genres, and engagement with different types of texts. While the ART captures a specific aspect of print exposure, reading habits encompass a more comprehensive picture of individuals' reading practices.

Another factor that might contribute to the absence of correlation is the influence of individual differences in reading preferences and motivations. It is plausible that individuals with high ART scores may have developed their recognition abilities through exposure to a specific subset of authors or genres, while their reading habits might be more diverse and reflective of personal interests. Additionally, some individuals may engage in extensive reading without necessarily focusing on author recognition, opting for a broader range of texts and genres.

Furthermore, it is important to consider the potential limitations of the measures used in this study. The ART, while widely used as a measure of print exposure, may not capture the entirety of individuals' familiarity with authors. It primarily relies on

recognition rather than depth of understanding or engagement with their works. Similarly, the reading habits questionnaire used in this study, while providing valuable insights into participants' reading behaviors, may not fully capture the complexity and multidimensionality of reading practices and preferences.

Despite the limitations, the study's results and findings provide valuable insights into the relationship between L1 print exposure, lexical coverage and lexical guessing, contributing to the understanding of how these independent variables influence lexical guessing in the context of reading comprehension of EFL students.

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APPENDIX 1.

Author Recognition Test

Author Recognition Test 작가 인지력 테스트

• 나이 _____ (Undergraduate / Graduate) ID _____ (핸드폰 번호 뒤의 내지리를 적어주세요.)

아래 제시된 보기들은 사람들의 이름입니다. 이 실험은 빠르게 3분간 진행됩니다.

130개의 보기 중 실제 작가 (문학, 소설, 시를 출판한 작가)의 이름이라 생각되는 이름에 체크해주세요.

작가가 아닌 사람의 이름을 고를 경우 감점이 있으므로 작가라고 확실하는 사람의 이름 옆에만 체크해주세요.

감사합니다

강미란	고찬호	공지영	곽지혜	권상훈	권영미	김광섭	김기림	김대현	김들욱	김미경	김상욱	김소월
김승욱	김승호	김연주	김영하	김유빈	김우정	김익현	김주환	김지수	김지영	김진아	김춘수	김태운
김호연	김홍신	김훈	나도향	남성은	노다인	노수빈	노지영	문영수	박경리	박경환	박목월	박미진
박민규	박범신	박상진	박석준	박선우	박순혁	박완서	박우진	박우성	박재삼	박지안	백석	백유진
서상우	석예린	석예슬	손다현	손유리	손창섭	신경숙	신주영	신지원	안경희	안기영	안도현	안미영
양귀자	양미연	양혜진	엄상섭	오민준	오예지	육상혁	우민성	원혜원	유성민	유영미	유주은	유흥준
윤동주	윤승현	윤정은	윤홍길	은희경	이경진	이광수	이문열	이미예	이민진	이상	이상화	이선아
이외수	이육사	이주은	이정준	이하늘	이현수	임채은	임주희	임화	장계형	정영준	전상훈	정인보
정지아	정지웅	조세은	조세희	조승원	조정래	채만식	전명관	최남선	최대은	최민지	최소라	최인아
최인훈	최지안	최진영	최태준	추예은	허동민	허강	허설아	허유빈	허진건	홍재은	황석영	황석우

APPENDIX 2.

Reading Habits Questionnaire

Reading Habits and Reading Patterns Questionnaire

독서 습관과 패턴 설문지

- 나이 _____
- ID _____ (핸드폰 번호 마지막 4자리 수를 적어주세요)

본인은 한국에서 중학교, 고등학교 교육과정을 모두 이수 하였나요? 예 / 아니요

각 항목 질문을 읽고 본인에게 해당하는 번호와 정답에 동그라미 쳐주세요.

1. 본인은 독서를 얼마나 자주 하나요?

1 2 3 4 5
전혀 하지않음. 일주일에 2-3개. 매우 자주읽음

2. 어떤 항목을 주로 읽나요? (해당하는 항목 모두 답변해주세요)

신문	소설	성경
역사책	잡지	단편소설
레포트/논문	만화책	시
종교관련	기타 _____	

3. 독서를 얼마나 즐기나요?

1 2 3 4 5

4. 지난 1년간 얼마나 많은 책, 또는 작품을 읽으셨나요?

(1 = 0권 , 2 = 1-9권 , 3 = 10-19권 , 4 = 20-29권 , 5 = 30-49권 , 6 = 50권 이상)

1 2 3 4 5 6

5. 좋아하는 독서 형태를 적어주세요. 2번에 적혀 있는 항목에서 해당하는 항목들을 적어주세요.

APPENDIX 3.

Lexical Guessing Task (Lexical Coverage 95%)

Lexical Guessing

영어 지문에서의 단어 추론 검증

- 나이 _____
- ID _____ (핸드폰 번호 마지막 4자리 수를 적어주세요)

주어진 지문은 IELTS 시험으로부터 발췌된 지문입니다. 이 지문은 본래의 단어와 전혀 관련이 없는, 실제로는 존재하지 않는 단어들(non-sense word)이 포함되어 있습니다. 지문을 읽은 후, 밑줄이 그어진 단어들의 뜻을 맥락에 맞게 추론하여 해당하는 번호 칸에 적어주세요. 답안은 한국어, 영어 모두 가능하며, 유의어에 해당하는 비슷한 영단어, 번역한 한국어 단어, 풀어서 추론한 것도 모두 가능합니다.

다른 모르는 단어가 있을 가능성이 있기에 현 페이지 아래에 단어와 뜻이 제공됩니다. 문제를 푸는 과정에서도 주어진 단어와 뜻을 참고할 수 있습니다.

시간은 25분 주어지며 시간이 다 소요된 경우, 미완성 상태로 제출합니다.

The Life and Work of Marie Curie

Sole 유일한, 단 하나의

Savings 저금, 절약된 금액

Far into the night 밤늦도록

Robots at Work

Typeset 활자조판

Compile 편집하다, 합치다

Editorial 편집과 관련된

Suburb 교외

Automate 자동화하다

Facsimile 복제, 복사

The Life and Work of Marie Curie

Marie Curie is probably the most famous woman scientist who has ever lived. Born Maria Sklodowska in Poland in 1867, she is 1.shulzle for her work on radioactivity, and was twice a winner of the Nobel Prize. With her husband, Pierre Curie, and Henri Becquerel, she was 2.zillited the 1903 Nobel Prize for Physics, and was then sole winner of the 1911 Nobel Prize for Chemistry. She was the 3. frive woman to win a Nobel Prize.

From childhood, Marie was remarkable for her 4. blarvish memory, and at the age of 16 won a gold medal on 5. mump of her secondary education. Because her father 6. drimbulate his savings through bad investment, she then had to take work as a teacher. From her earnings she was able to 7.frazzalize her sister Bronia's medical studies in Paris, on the understanding that Bronia would, in turn, later help her to get an 8.draxy.

In 1891 this promise was 9.flonkified and Marie went to Paris and 10.trizivan to study at the Sorbonne (the University of Paris). She often worked far into the 11.storze and lived on little more than bread and butter and tea. She came first in the examination in the physical sciences in 1893, and in 1894 was placed second in the examination in mathematical sciences. It was not until the spring of that year that she was 12.slarmied to Pierre Curie.

해당하는 번호의 밑줄 친 단어의 의미를 적어주세요.

1. Shulzle :
2. Zillited :
3. Frive :
4. Blarvish :
5. Mump :
6. Drimbulate :
7. Frazzalize :
8. Draxy :
9. Flonkify :
10. Trizivan :
11. Storze :
12. Slarmy :

APPENDIX 4.

Lexical Guessing Task (Lexical Coverage 98%)

Robots At Work

The newspaper production process has come a long way from the old days when the paper was written, edited, typeset and ultimately 1. lamired in one building with the journalists working on the upper floors and the printing presses going on the ground floor. These days the editor, sub-editors and journalists who put the paper together are likely to find themselves in a totally different building or maybe even in a different city. This is the situation which now 2. blivvers in Sydney. The daily paper is compiled at the editorial headquarters, known as the pre-press center, in the heart of the city, but printed far away in the suburbs at the printing center. Here human beings are in the 3. plomby as much of the work is done by automated machines controlled by computers.

Once the finished newspaper has been created for the next morning's edition, all the pages are transmitted 4. nopple from the pre-press center to the printing center. The system of transmission is an update on the 5. shizzy page facsimile system already in use on many other newspapers. An image-setter at the printing center delivers the pages as film. Each page takes less than a minute to produce, although for color pages, four versions, once each for black, cyan, magenta and yellow are sent. The pages are then processed into photographic negatives and the film is used to produce aluminum printing plates ready for the presses.

해당하는 번호의 밑줄 친 단어의 의미를 적어주세요.

1. Lamire
2. Blivver
3. Plomby
4. Nopple
5. Shizzy

국 문 초 록

한국 대학생의 모국어 인쇄물 노출경험과

영어 텍스트에서의 어휘 밀집도가

어휘 추론에 미치는 영향

김 지 영

외국어교육과 영어전공

서울대학교 대학원

본 연구는 외국어로서 영어를 학습하는 (EFL) 대학생을 대상으로 제 1 언어(L1) 인쇄물 노출 경험이 제 2 언어(L2) 어휘 추론 능력에 미치는 영향을 조사한다. 이 연구는 참가자의 모국어(L1) 경험과 외국어(L2)에서 낯선 단어의 의미를 추론하는 능력 사이의 관계를 탐구한다. 또한 다양한 어휘 밀집도 (lexical coverage)가 참가자의 어휘 추론 능력에 미치는 영향을 조사한다.

연구 방법론에는 실험 과제를 구체화하기 위한 사전연구와 한국인 대학생을 대상으로 실시한 설문지 및 어휘 추측 과제를 통한 데이터 수집이 포함되어 있다. 수집된 데이터는 IBM SPSS 를 사용하여 이원분산 분석(ANOVA)으로 상호관계를 분석한다. 그 결과 참가자의 L1 인쇄물 노출경험과 L2 어휘 추측 능력 간에 유의미한 상관관계가 있는 것으로 나타났다. 모국어에서의 언어적 배경이 더 강한 참가자는 낯선 단어의 의미를 추론하는 데 더 높은 숙련도를 보였다. 또한 이 연구는 어휘 습득에 있어 독서 습관의 역할을

강조하며, 독서 경험이 풍부한 사람이 어휘 추론 능력이 더 뛰어난 경향이 있음을 보여준다.

본 연구의 결과는 모국어의 인쇄물 노출경험과 어휘 밀집도가 모두 EFL 대학생들의 어휘 추론 능력에 유의미한 영향을 미치는 것으로 나타났다. 모국어 인쇄물 노출경험 수준이 높은 참가자는 낯선 단어의 의미를 추측하는데 더 나은 성적을 보였다. 또한 텍스트에서 알려진 단어의 비율을 나타내는 어휘 밀집도 수준도 참가자의 어휘 추론 능력에 유의미한 영향을 미친다. 그러나 모국어 인쇄물 노출경험과 어휘 밀집도 간에는 유의미한 상호작용이 없었으며, 이는 어휘 밀집도의 수준에 따라 모국어 인쇄물 노출경험이 어휘 추론 능력에 미치는 영향이 달라지지 않음을 나타낸다.

또한 이 연구는 다양한 수준의 어휘 밀집도가 참가자의 어휘 추측 능력에 미치는 영향에 대해 탐구한다. 연구 결과에 따르면 참가자들은 목표 구절의 어휘 밀집도 수준이 높을 때 어휘 추측 과제에서 더 나은 성과를 보였다. 이는 알려진 단어의 밀집도가 높을수록 추론 과정이 용이하고 독해력이 향상된다는 것을 의미한다. 이 연구 결과는 언어 교육자에게 중요한 시사점을 제공하며, 효과적인 교육 전략을 설계할 때 참가자의 제 1 언어가 경험, 읽기 습관, 어휘 밀집도 수준을 고려하는 것이 중요하다는 점을 강조한다. 교육자는 모국어 인쇄물 노출경험의 역할을 인식하고 광범위한 읽기 연습을 장려함으로써 EFL 학습자의 어휘 습득을 촉진하고 어휘 추론 능력을 향상시키는 유익한 학습 환경을 조성할 수 있습니다.

결론적으로, 이 연구는 EFL 대학생의 L1 인쇄물 노출경험, 읽기 습관, L2 어휘 추측 능력 간의 상호 작용에 대한 효과를 제공한다. 이 연구 결과는 어휘 습득의 개인차를 이해하는 데 기여하고 어휘 추론 능력을 향상시키기 위한 목표 접근법을 개발하는 언어 교육자에게 정보가 제시된다.