# The Use of Reading Strategies in L1 and L2 Reading Comprehension in the Presence and the Absence of Language Threshold Effect

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INTRODUCTION

The role of metacognition and cognitive monitoring has gained a great deal of attention among researchers and educators since Flavell's (1979, 1985) work. This metacognitive aspect has been theorized in the field of L1 reading by Baker and Brown (1984) and supported by Palincsar and Brown's (1984) experimental study; using four reading strategies (questioning, clarifying, predicting, and summarizing) in a training program called a reciprocal teaching, Palincsar and Brown showed that poor readers improved their comprehension not only right after the training sessions but also in the delayed tests. Since then, strategic aspects of reading have been found to make significant contributions to explaining L1 reading comprehension in various studies (Kletzien, 1991; Bauman, 1988; Brown & Palincsar, 1989; Bentio, Foley, Lewis, & Prescott, 1993; Meyer, Young, & Bartlett, 1989; Ashman & Conway, 1993).

The strategic aspects of L2 reading has also been attended and investigated. The general findings were consistent with those from L1 reading research in the sense that various reading strategies turned out to play a significant role in explaining L2 reading comprehension. However, how explanatory power of L2 reading strategies changes when the language threshold effect disappears has not been explored yet. The language threshold effect was first noted by Cummins (1979) under the name of the Linguistic Threshold Hypothesis. The hypothesis posited that the transfer of first language reading skills to the foreign language takes place only when L2 readers have reached a threshold level of competence in the target language (L2). Once they go beyond the threshold level of L2 proficiency, the L2 readers can utilize their previous experience in L1 literacy operation and constructs in either their L1 reading or in their L2 reading comprehension according to the hypothesis. Several studies confirmed the language threshold effect in L2 reading (Bernhardt and Kamil, 1995; Bossers, 1991; Brisbois, 1995; Carrell, 1991; Fecteau, 1999; Lee & Schallert, 1997; Pichette, Segalowitz, & Connors, 2003). However, how the language threshold effect makes differences in the use of reading strategies have not been attended yet and thus needs to be investigated. The present study explores the issue by analyzing the relative contribution of reading strategy use to L2 reading in the presence of language threshold effect and the absence of it. We will also look into whether or not L2 reading strategies make an independent contribution to L2 reading after partialling out the effect of L1 reading competence and investigate the differences in the use of reading strategies in L1 and L2 reading depending on the language threshold effect.

**The effect of reading strategies in L2 reading comprehension**

Research on the effect of reading strategies in L2 reading comprehension can be summarized based on the research method. The use of various strategies has been instantiated in qualitative studies using think-aloud protocols and interviews (Jimenez, Garcia, & Pearson, 1996; Block, 1992; Li & Munby, 1996; Dhieb-Henia, 2003; Anderson, 1991). Since the results found in qualitative studies are detailed

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descriptions of cognitive processes involved during reading, the summary of such studies can be a starting point for further quantitative investigation, which can be generalized for population. The quantitative research has focused on correlational analyses and covariance structures of important components that explain L2 reading comprehension (Phakiti, 2003, 2008; Huang, Chern, & Lin, 2006; Schoonen, Hulstijn, & Bossers, 1998; Gelderen, et al., 2004; Gelderen, et al., 2007; Dhieb-Henia, 2003; Purpura, 1997, 1998, 1999). The results from the quantitative studies consistent with the findings of the qualitative studies will consolidate the effect of reading strategies on L2 reading.

In qualitative research, Block (1992) aimed to figure out whether the findings from the research on L1 reading strategies could be transferable to L2 reading strategies. She compared how sixteen proficient readers (eight L1 and eight L2) and nine non-proficient readers (three L1 and six L2) dealt with the problems of identifying difficult referents and defining unknown words in an expository text. The analysis of think-aloud protocols suggested that both L1 and L2 readers went through the same three phases of problem-solving processes with six specific steps of the process; the evaluation phase (problem recognition and problem source identification), the action phase (strategic plan and action/solution attempt), and the checking phase (check and revision). Although varying in degrees of completeness and explicitness for each problem, it was found that the referent problem was more fully operational for the strategy use than the lexical problem among the proficient readers. The difference between L1 and L2 proficient readers was that L2 readers did not verbalize their strategy use as much as L1 readers did even though the strategies L2 readers used were as successful as those of L1 readers. As far as the less proficient readers were concerned, both the L1 and L2 readers did not recognize the problems as well as the proficient readers did and were less likely to take action even when they did notice some problems.

Jimenez et al. (1996) also analyzed the patterns of strategies that Spanish bilinguals and English monolinguals used while reading an English text; the participants were eight successful Spanish bilingual children, three less proficient Spanish bilingual children, and three proficient English monolingual children. They identified twenty two distinct strategies from the analyses of the think-aloud protocols and grouped them into three categories (text-initiated, reader-initiated, and interactive). Except for translating, the feature that distinguished bilingual children from monolingual children most was found to be vocabulary-related strategies. L2 readers actively used cognate information to figure out the meanings of unknown words, whereas L1 readers did not need to rely on this strategy because they already had enough vocabulary knowledge (ceiling effect). In addition, the proficient readers were found to utilize an array of strategic processes more often than the less proficient did regardless of the language for reading.

Noting the significant effect of strategic knowledge on L2 reading comprehension observed in various studies, Dhieb-Henia (2003) conducted a strategy instruction study in a Tunisian tertiary setting. Dhieb-Henia implemented a 10-week metacognitive strategy training course (n=35) in university and compared the results of the pre-/post-tests on declarative and procedural knowledge of reading strategies with those from the students in a different university who did not receive the training; the control group

(n=27) received a traditional language-focused instruction. The results of the paired samples *t*-tests showed the significant increases for the experimental group on the composite scores of the timed tasks involving skimming, search reading, scanning, and careful reading. The control group, however, showed no significant increases in the scores of these tasks. When further analyzing the retrospection data collected from 12 participants in the experimental group right after the pretests and the posttests, Dhieb-Henia also found fundamental differences in how to tackle a task of reading research article between before and after the metacognitive instruction. Before the strategy instruction, the careful, bottom-up, straight-through approach was the strategy most widely used resulting in a failure of comprehension or an unmanageability of the task, whereas selective reading for specific information and a top-down approach were more prominent after the instruction.

The results of the two qualitative studies and one mixed method study can be summed up as following; (1) L2 readers as well as L1 readers appear to be sensitive to using various reading strategies; (2) The degrees of using strategies may vary depending on the levels of reading proficiency; (3) The kinds of reading strategies used more often were different in L1 and L2 reading; and (4) The explicit learning of reading strategies enhanced the sensitivities to such strategies and improved the abilities to use them more effectively. This summary, however, needs to be understood with a caution because of the nature of qualitative studies not to be generalized to population.

The findings of quantitative studies can inform us of the generalizability of the effects of reading strategies on L2 reading comprehension. Gelderen et al. (2007) investigated the role of metacognitive knowledge in L1 and L2 reading comprehension in relation to other language specific variables and those related to processing efficiency. Over the three consecutive years, they tracked the comprehension development of 389 adolescents (8 through 10 grade) in L1 (Dutch) and L2 (English) reading along with other important independent variables and conducted a series of structural equation modeling analyses. The result of the model including the metacognition (exogenous variable) and reading comprehension (endogenous variable) indicated that regression coefficients of the metacognition on L2 reading was .64*, .18*, and .35* in each grade. These consistent significant contributions were found in L1 reading as well; .66*, .21*, and .48*. Gelderen et al. concluded that the continuous predictive power of metacognitive knowledge on L2 reading over the three consecutive years serves as evidence for the transfer hypothesis postulating L1 reading competence becomes functional in L2 reading comprehension. However, they also explained that due to the similar pattern found in L1 reading, metacognitive knowledge may be derived from a more general developmental effect regardless of a language for reading.

One interesting aspect of strategy use was noted by Phakiti (2008). Drawing a framework from the field of psychology (Spielberger, 1972), Phakiti distinguished trait from state constructs. A trait construct is a feature that stays stable over time because it is considered part of one's inherent qualities, whereas a state construct is one that can change depending on contexts and tasks. Since the degrees of and the patterns of different reading strategy use can be influenced greatly by an interaction among an

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individual's traits, contextual features and strategic competence (Chapelle, 1998), Phakiti hypothesized that the actual use of different reading strategies may vary depending on different reading tasks. In order to investigate the dynamics of reading strategy use as a trait and as a state attribute, Phakiti analyzed the relationships of trait metacognitive strategies, trait cognitive strategies, state metacognitive strategies, and state cognitive strategies at two time points (a mid-term exam and a final exam); n=561 (Thai university students). Questionnaires on trait strategies were collected one week before each exam, and those on state strategies were implemented right after each exam. The questionnaires implemented right after the exam were considered to reflect a state reading strategy perspective in that the responses to the questionnaires were limited to the strategies that the students used during the exam.

The correlation between the two trait metacognitive strategy uses (TMSU), collected two months apart from each other, was .56*, the correlation between the TMSU and the state metacognitive strategy use (SMSU) at time 1 was .74*, the correlation between the TMSU and the SMSU at time 2 was .79*, the correlation between the trait cognitive strategy use (TCSU) and the state cognitive strategy use (SCSU) at time 1 was .22*, and the correlation between the TCSU and the SCSU at time 2 was .25*. The results suggested that the metacognitive strategy use is more stable than the cognitive strategy use because the correlations between TMSU and SMSU at times 1 and 2 were relatively higher (.74 and .79) than those between TCSU and SCSU at both time points (.22 and .25). This finding is consistent with a general intuition on the constructs in a sense that cognitive processes involved in reading may well vary depending on features of texts and their difficulties, whereas one's competence in metacognition does not change easily. As to the effect of strategy use on L2 measurements (lexico-grammatical knowledge and reading comprehension), Phakiti concluded that "more successful test-takers reported higher awareness of state and trait cognitive and metacognitive strategy use than less successful ones" (p.259); see Phakiti (2008) for more detailed path analysis.

To summarize, the results from the quantitative studies are consistent with those of qualitative studies. The summary (1) was supported by Gelderen et al. (2007) in that the role of metacognition was similar in L1 and L2 reading (significant contributions over the three consecutive years), and the summary (2) was supported by the two quantitative studies in that successful readers were more sensitive to not only trait but also state reading strategy use in Phakiti's (2008), and the relative contributions of metacognitive knowledge were different at different grade levels (different levels of reading proficiency) in Gelderen's et al. (2007). However, there has not been enough research to support the summary (3) yet in quantitative studies: the kinds of reading strategies used more often were different in L1 and L2 reading.

### The present study

The present study attempts to explore the summary (3) – what kinds of reading strategies explain individual differences in L1 and L2 reading – quantitatively in relation to language threshold effect. The use of L1 and L2 reading strategies will be compared depending on the presence of the language

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threshold effect in three research questions. The present study adopted a state reading strategy view assuming that the effectiveness of reading strategies is contingent on task features and readers' reading/L2 proficiency relative to the given reading task; thus, we assume that different reading strategies will take effect over different tasks. Furthermore, conducting post-hoc analyses, we specified a condition of the non-language threshold effect with a significant correlation between L1 and L2 reading comprehension and a condition of language threshold effect with a non-significant correlation (Lee & Schallert, 1997). Based on the aforementioned needs for research, the three research questions were set up as following:

1. Does explanatory power of reading strategies in L2 reading change when the language threshold effect disappears?

2. Do reading strategies make an independent contribution to L2 reading comprehension after controlling for the effect of L1 reading competence?

3. How differently are L1 and L2 reading strategies used in the language threshold effect condition and the non-language threshold effect condition?

Before looking into the study, our predictions on the research questions need to be stated in terms of what is known about language threshold effect, L2 proficiency and the limited capacities of working memory. A general finding on the threshold effect on L2 reading is that L2 readers with more advanced L2 proficiency can afford their cognitive resources or working memory to engage themselves in inferential processes more and better than those with less advanced L2 proficiency (Pulido, 2007). Those with lower L2 proficiency, on the other hand, cannot afford their cognitive resources to higher-order processing because their attention is occupied with lower-level processing such as decoding and a syntactic analysis. Thus, L2 readers free from the language threshold effect are placed in a position where they can actively utilize their L1 reading competence. Given that reading strategy use taps into higher-order processing, it is likely that readers whose L2 proficiency go beyond the threshold level can utilize reading strategies more and better than those with lower L2 proficiency thanks to more cognitive resources available for them. Based on this rationale, we predicted that the variance that reading strategies explain will be greater in the non-language threshold effect condition than in the language threshold effect condition.

As for the second research question, there will be significant effects that remain after partialling out the contribution of L1 reading competence if we follow the suggestion in Gelderen's et al. (2007); they maintained a language-independent contribution position of reading strategies, which indicates that reading strategies have independent contribution regardless of a language for reading. However, if the contribution of reading strategy use disappears after controlling for L1 reading competence, it will suggest that the strategies use is limited to L1 reading, and any significant contribution of strategy use in L2 comes from L1 reading competence. Since there were no comprehensive theories postulated on this question yet to the authors' knowledge, we took a more exploratory position.

The availability of cognitive resources framed within working memory and cognitive processes involved during reading can be applied to the comparison between L1 and L2 reading strategy use in a similar manner. As there are few needs for lower-order processing in L1 reading due to expected ceiling effect of lower-order processing and thus more cognitive resources for higher-order processing, we anticipated that L1 readers are likely to show similar patterns of reading strategy use to those of more advanced L2 readers or readers free from the language threshold effect utilize. That is, both groups of readers can make more cognitive resources available for strategies use compared to the readers suffering from the language threshold effect.

METHOD

**Participants**

The total of 217 university students in Korea participated in the study, and an intact group sampling technique was used; the two courses from which the participants were recruited were *English reading and writing* offered to freshmen (three sections, n=56) and *Integrative English*, offered to sophomores (two sections, n=73 for the mid-term exam; two sections, n=91 for the final exam).    The data from the students whose first language was not Korean were excluded. The participants have studied English at least for ten years in the previous years (four years in elementary school and three years in middle school and three years in high school). Both of the courses involved half of the class time in reading activities, and the other half in writing in *English Reading and Writing* or listening in *Integrative English*. The average of TOEIC (Test of English for International Communication) scores at the time of entrance was about 550 for all who go to the university where the study was conducted, and a majority of the students did not have experiences living abroad. The sample size reduced to 101 when the final analyses were conducted because subjects with any missing data were excluded.

**Instruments**

Reading Strategy Questionnaires

Following Flavell's (1979, 1985) definition of metacognition (knowledge about cognition and regulation of cognition) and considering two reading strategy inventories widely used in research (Purpura, 1997; Mokhtari & Reichard, 2002; Mokhtari & Sheorey, 2002), we came up with 23 items of a five-point Likert scale for an L1 reading strategy questionnaire (14 cognitive strategies and 9 metacognition strategies). A key criterion that distinguished cognitive from metacognitive strategies in our classification was whether an item involved any evaluative function of one's own comprehension because we deemed that any regulation of one's cognition while reading should begin in some form of problem-detection, which can be dealt with later for problem-solving. L2 specific reading strategies were added to the L1 items. Since L2 reading processing has commonly been studied within a bottom-up vs. top-down processing

framework, items were grouped into two categories, one involving lower-level processing (5 items) and the other tapping into higher-level processing (4 items). The Cronbach's α was .856 for the L1 reading strategy questionnaire (n=158) and .879 for the L2 reading strategy questionnaire (n=220).

L2 reading comprehension tests

The mid-term exams and the final exams of *English Reading and Writing* and *Integrative English* were used as a measure of L2 reading comprehension. Since both the tests were an achievement test, the participants were familiar with the passages they were tested on; instructors covered the reading passages in class, and the contents of the reading were used for writing in *English Reading and Writing* class, whereas they were connected to the contents in listening activities in *Integrative English* class. *English Reading and Writing* was the first English course offered to freshmen; the topics were rather general; the examples of the topics are *How to Make a Strong First Impression?*, *What does it Take to be Successful?*, and *How has Technology Affected your Life?*. The topics covered in *Integrative English* were related to serious issues of our modern time; for examples, the right to die vs. the right to life, the global village (problems of globalization), and the global child (issues in international adoption) were some of the unit titles covered in the course. The type of questions and the number of items for each question type in three exams used in the present study are summarized in Table 1. Each exam was developed by instructors teaching each course (five for each course). The Cronbach's e Cro .762 for *English Reading and Writing* (mid-term exam), .540 for *Integrative English* (mid-term exam), and .809 for *Integrative English* (final exam). Since the reliability of *English Reading and Writing* (final exam) turned out to be too low (.447), the analysis of the data from this group was excluded.

[TABLE 1 TO BE INSERTED HERE]

L1 reading comprehension tests

In order to measure L1 reading comprehension, 25 questions were chosen from the two existing sets of the Test of Korean Language, a nationally accredited Korean language test. It is administered by the Center for Korean Language and Culture, a non-profit organization established for the assessment of Korean language proficiency for native Korean speakers. Unlike the original test that takes 90 minutes, the test used in the present study took 40 minutes because the number of items was reduced from 60 to 25 due to time constraints. Types of questions and the number of items for each type are summarized in Table 1. The Cronbach's e Cro .524.

**Procedure**

The mid-term exams were administered on the 8th week of the semester, and the final exam, on the 16th week for an hour each. Students who took the same course in different sections were given the test at the

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same time on the same day. The exams were also given on the same day for both courses *English Reading and Writing* and *Integrative English* but at a different time. The two researchers supervised the exams of the participants and asked them to fill out the reading strategy questionnaire right after they finished the tests; they were asked to check how often they used each strategy during the test on a five-point Likert scale, 1 indicating *not used at all* and 5 indicating *used most of the time*. It took about 5 to 15 minutes for the participants to complete the 32-item questionnaire.

L1 reading comprehension was administered during the makeup week (12th week of the semester). Since it was a make-up week, the recruitment of the participants was done on a volunteer basis. Those who showed up on the make-up week were given the Korean test first for 40 minutes and then the questionnaire on their L1 reading strategy use right after for 5 to 15 minutes.

**Data Analysis Outline**

Following the state perspective on reading strategy use, we first identified items that had significant effect on reading comprehension using the stepwise multiple regression technique; we assumed that readers tested on different reading tests will use reading strategies differently. Since we had to use data that included both L1 and L2 reading strategy use and reading comprehension, the sample size decreased to as following: *English Reading and Writing* mid-term exam (N=24), *Integrative English* mid-term exam (N=49), and *Integrative English* final exam (N=28), and L1 reading comprehension, which is the total of the three groups (N=101). In order to see the explanatory power of reading strategy use on L1 and L2 reading, the items of significant effect on each test were entered into a multiple regression analysis as one model. To figure out a condition for language threshold effect, we calculated correlations between L1 and L2 reading comprehension in each group; a significant correlation between L1 and L2 reading indicates the non-language threshold effect condition, and no significant correlation, the language threshold effect condition.

To address the research question 2, whether reading strategies made a significant contribution after controlling for the effect of L1 reading competence, a hierarchical multiple regression analysis was conducted; L1 reading was entered first, and then reading strategy items together next to see $\Delta R^2$. The different patterns of strategy use between L1 reading and L2 reading at the presence and the absence of language threshold effect were examined (research question 3) by conducting a series of paired samples *t*-tests. It was possible to use a paired samples *t*-test between L1 and L2 reading strategy items in each of the three groups because there were data available on the reading strategy use in L1 and L2 reading of the same participants. We then identified specific items of significant difference between the use of L1 and L2 reading strategy in the language threshold condition and in the non-language threshold condition; following the Bonferroni's correction, the α level was set at .0022 (.05/23).

RESULTS

The means and the standard deviations of L1 and L2 reading strategy use were summed up in Table 2 (available on the supplementary materials). In general, the participants used reading strategies more often when reading an L2 text than an L1 text; L2>L1 (items 2, 3, 4, 5, 8, 10, 14,15,16,17,18,19,21,22), L1>L2 (items 1, 6, 7, 9, 11, 12, 13, 20),   and L1=L2 (item 23). The means and the standard deviations of reading comprehension tests were given in Table 3. The average of 25-item L1 reading test was 16.86, and the averages for each group were 17.89 in ER&W-mid, 17.39 in IE-mid, 16.14 in IE-final respectively; note that the participants in three different groups took the same L1 reading test. The averages of each L2 reading test were 20.20 in ER&W-mid (30-item test), 16.03 in IE-mid (20-item test), and 16.07 in IE-final (20-item test); note that unlike in L1 reading, the participants in each L2 reading group took a different reading comprehension test, and thus the scores are not comparable among the groups.

[TABLE 3 TO BE INSERTED HERE]

**Research Questions**

1.  Does explanatory power of reading strategies in L2 reading change when the language threshold effect disappears?

Before the investigation of the research question, our state perspective on the use of reading strategies needs to be confirmed postulating that different task conditions induce the use of different kinds of strategies within an individual. As shown in Table 4, there was no overlap among the items that played a significant role in three L2 reading tests and one L1 reading test: the items that showed significant contributions were items 16 and 17 for L1 reading, items 4, 11, and 30 for ER&W-mid, items 6 and 24 in IE-mid, and items 3, 22, and 27 in IE-final.

The results of multiple regression analysis with the items of significant effect as predictors as one model show that reading strategies made a significant contribution to L1 reading comprehension and L2 reading comprehension of the three groups; the models were significant for KRC and IE-mid at .05 α level and ER&W-mid and IE-final at .01 α level. However, the proportion explained by the use of reading strategies varied depending on the presence/absence of language threshold effect and a language for reading. The groups that showed the language threshold effect was IE-mid because the correlation between L1 reading and L2 reading was not significant ($r$ = .09 and p = .537). This indicates that readers' L2 proficiency in this group was not advanced enough to overcome the threshold effect. On the contrary, the threshold effect was not found in ER&W-mid and IE-final because the correlations between L1 reading and L2 reading were .550 for ER&W-mid (p=.013) and .542 for IE-final (p=.003).

In the condition of language threshold effect, the explanatory power was far smaller than the condition of non-language threshold effect (less than a third), even though the model was still significant; 16.2% for IE-mid as opposed to 59% and 61% for ER&W-mid and IE-final respectively. As to the comparison between L1 and L2 reading, the proportion of explained variances by L2 reading strategies in the language threshold effect condition was twice as the proportion accounted for by L1 reading strategies (16.2% for the threshold effect condition as opposed to 8 % for L1 reading) and more than seven times in the non-threshold effect condition (59% and 61% for the non-threshold effect condition as opposed to 8 % for L1 reading). Thus, it is suggested that the presence of language threshold effect and a language for reading are important variables in explaining the relative contributions of reading strategies to L2 reading.

[TABLE 4 TO BE INSERTED HERE]

2. Do reading strategies make an independent contribution to L2 reading comprehension after controlling for the effect of L1 reading competence?

The relationship between reading strategies and L1 reading competence was explored using a hierarchical multiple-regression analysis; L1 reading was entered as first variable and the reading strategy items of significant effect all together as second variable. Table 5 shows that the contribution of L1 reading was significant in ER&W-mid and IE-final (25% in ER&W-mid and 29.3% in IE-final), whereas L1 reading did not explain a significant portion of L2 reading (.08%) in IE-mid. This is not surprising considering that the correlations between L1 reading and L2 reading were .500 (p=.013) and .542 (p=.003) in ER&W-mid and IE-final respectively and .090 (p=.537) in IE-mid. The examination of change in $R^2$ after reading strategies entered as second variable in the hierarchical regression model is a key to answering the research question 2. Table 5 shows that all of the three groups had significant contributions of reading strategies even after partialling out the effect of L1 reading competence. The contribution was 43.2% (p=.001) and 36.7% (p=.001) in the non-language threshold condition and 16.4% (p=.017) in the language threshold effect condition. Since the role of reading strategies remained significant in all of the three groups even after the effect of L1 reading competence was partialled out, it is concluded that reading strategies made an independent contribution to L2 reading regardless of the L1 reading competence and the presence or the absence of language threshold effect.

[TABLE 5 TO BE INSERTED HERE]

3. How differently are L1 and L2 reading strategies used in the language threshold effect condition and the non-language threshold effect condition?

Whether the differences in the use of reading strategies in L1 and L2 reading are influenced by language threshold effect was analyzed in the research question 3. A series of paired samples *t*-tests were run in each group using the data on the L1 and L2 reading strategy use of the same participants; every participant completed the 23-item L1 reading strategy questionnaire and 32-item L2 reading strategy questionnaire, but since there were nine L2 specific items not included in the L1 questionnaire, they were excluded for the analysis. Following the Bonferroni's correction, the α level was set at .0022 because the tests were run 23 times for 23 pairs of items (.05/23).

The results of an individual reading strategy item analysis are shown in Table 6. In ER&W-mid the participants used item05, "*I tried to recite sentences to help understand difficult parts*." significantly more often when they read an L2 text than when they read an L1 text; *t* (23) = 4.183, p=.000. In the other group of non-language threshold effect, IE-final, there were no items that showed a significant difference in the use of L1 and L2 reading strategy even though the same item, "*I tried to recite sentences to help understand difficult parts*." reached close to a significant level of .0022; *t* (27) = 3.211, p=.003. In the last group, IE-mid reflecting the language threshold effect, item18 "*I made an effort to analyze and organize the contents of the reading*" was used significantly more frequently in L1 reading than in L2 reading; *t* (48) = -4.302, p=.000. Thus, the result suggests that L2 readers free from the threshold effect used Item05 more often when reading an L2 text than they read an L1 text, whereas L2 readers suffering from the threshold effect used Item18 significantly less than they did in L1 reading.

[TABLE6 TO BE INSERTED HERE]

DISCUSSION

The differences in L1 and L2 reading strategy use between the language threshold condition and the non-threshold effect condition need to be explained in two aspects: their explanatory power and specific items that explained significant differences. Overall, our predictions on the three research questions were confirmed by the results of the present study except for one on the comparison between the L1 reading group and the non-language threshold effect (L2 reading) group in terms of explanatory power of reading strategies. Within L2 reading groups, the language threshold effect was shown to affect the use of reading strategies because the proportion explained by the reading strategy use differed greatly between the language threshold and the non-language threshold effect groups; two non-language threshold effect groups (ER&W-mid and IE-final) had a similar $R^2$ values (.590 and .610), whereas one language threshold effect group (IE-mid) had a greatly smaller $R^2$ value (.162). Our interpretation on this result is that L2 readers suffering from the language threshold effect benefited from reading strategy use relatively less than L2 readers undergoing no threshold effect because of their limited cognitive resources available. In other words, because of the needs for lower-order processing such as decoding and syntactic

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processing, they could not afford to assign their cognitive resources on the use of reading strategies and benefit from it as much as those in the non-language threshold effect group. What needs to be noted in this result, however, is that the reading strategy use still made a significant contribution in the language threshold effect group.

As far as the comparison between the L1 reading group and the non-language threshold effect (L2 reading) group, we predicted that the explanatory power of L1 reading strategies would be similar to the one observed in the non-language threshold effect group in that both groups were assumed to have more cognitive resources available. This prediction, however, was not confirmed. The result showed that $R^2$ in the non-language threshold effect condition was far larger than that in the L1 reading condition (.590 and .610 in L2 as opposed to .08 in L1) although the much smaller explanatory power in L1 reading was still significant (p=.017). This was even smaller than $R^2$ of the language threshold effect condition, which was .162.

Our speculation is that a nature of state perspective on reading strategy use may have played an important role. In general, the task of L1 reading can be perceived much easier compared to L2 reading comprehension because the problems during L1 reading are not as obvious as those in L2 reading; the L1 readers do not usually confront difficulties in vocabulary or syntactic analyses. Since a task perceived relatively easy does not induce the strategy use as much as a difficult task does in general, it could have been the case that the readers in the L1 reading condition did not see needs for the use of reading strategies as often as in the L2 reading conditions. They may have not detected problems to be solved with reading strategies even though these problems deserved due attention. This phenomenon could have come from their facility in lower-order processing making them feel the task relatively easy, and problems involved in higher-order thinking may have been difficult to detect and solve. This in turn may have resulted in a much smaller explanatory power of reading strategies in L1 reading comprehension. This phenomenon was partially observed in Jimenez et al. (1996); L1 readers did not have to use vocabulary related strategies because of enough knowledge of it.

Our interpretation on these results of the research question one is as following. The readers in the L1 reading condition did not perceive needs for reading strategy use to a great degree, resulting in a much smaller explanatory power of reading strategies. The readers in the language threshold effect condition, on the other hand, were overwhelmed with too many problems to deal with but too few cognitive resources available. They had to draw on their available cognitive resources for reading strategy use, but the effect was somewhat constrained due to their limited cognitive capacities. Finally, the readers in the non-language threshold effect condition detected problems to solve and had cognitive resources available to solve the problems by using various reading strategies. This condition allowed the reading strategy use to explain a large portion of variances in L2 reading. Thus, it is summarized that the effect of L2 reading strategy use increases greatly when the language threshold effect disappears, but it still explains a small but significant proportion of the variances in L2 reading in the language threshold effect condition.

As for the second research question, it was often perceived that one's abilities to use reading strategies are transferred from L1 reading competence and thus part of it. However, this general speculation was not consistent with our finding because the use of L2 reading strategy had a significant contribution even after controlling for the effect of L1 reading competence in all of the three English reading groups. This instead confirmed what Gelderen et al. (2007) suggested in their study that metacognitive competence could be a language-independent construct from a developmental perspective. With the result found in adult EFL students, the independent contribution of reading strategies is suggested to be stable across different age groups. Thus, the effect of reading strategies turns out to be independent regardless of language for reading because it did not disappear even after the effect of L1 reading competence was partialled out.

The other aspect concerns individual items that showed significant differences in the use of L1 and L2 reading strategy depending on the presence or the absence of language threshold effect. The results of paired samples *t*-tests showed that item05, *"I recited the sentences softly when I had trouble understanding."* was used significantly more frequently in L2 reading of non-language threshold effect condition than in L1 reading. Even though the p value of item05 in IE-final was slightly higher (.003) than the targeted significant level (.0022), it was this item that showed the closest value to .0022 among the 23 items tested. Even though the item05 was not a significant predictor for L2 reading comprehension in any of the three L2 reading groups in the present study, it was shown that L2 readers free from the language threshold effect used the reciting strategy significantly more often in L2 reading than in L1 reading. The significance of phonological activities in L2 reading was indirectly addressed in Water's (2008) study. It showed that when a level of comprehension competence was controlled, L2 readers with reliable phonological inventories performed significantly better in L2 reading comprehension tasks than those with unreliable phonological inventories. It is probable that the insignificant contribution of reciting to L2 reading in the present study may be attributed to the relatively coarse grain size for analysis compared to Water's (2008) study.

As far as the language threshold effect condition is concerned, the item that showed a significant difference between L1 and L2 reading strategy use was item18, *"I made an effort to analyze and organize the contents of the passage for better understanding*." The readers used the item18 significantly more often when they read in L1 than in L2. L2 readers in the language threshold effect condition did not analyze and organize the contents of the passage for better understanding as much as they did in L1 reading; *t* (48) = -4.302, p=.000. Considering the limited cognitive resources in this condition caused by the language threshold effect, what is expected to suffer most is the one that taps into higher-order processing because it takes up more cognitive resources to be implemented. Since analyzing and organizing contents in a given passage involves the evaluation of main ideas in relation to many specific pieces of information, item18 is deemed to tax fairly higher-order cognitive processing. Thus, this is consistent with our prediction on the investigated question.

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CONCLUSION

Based on the findings of the study, two pedagogical implications can be drawn and discussed. First, regardless of the presence or absence of language threshold effect, the L2 reading strategy use had a significant effect on L2 reading independent of readers' L1 reading competence. For this reason, a reading strategy instruction needs to be part of an L2 reading program from the beginning to the advanced level of L2 proficiency. However, the proportion of coverage can be adjusted according to the level of L2 proficiency with a more emphasis on the reading strategy use for more advanced L2 readers. Secondly, the dynamic nature of reading strategy use for effective reading needs to be considered in developing and implementing a good reading program because specific strategies of significant effect varied in all of the three L2 reading groups in the present study. Good L2 reading programs should also consider readers' general tendency to use reading strategies, features that make comprehension more difficult, evaluation of effective strategies for different kinds of reading tasks, and assignment of attentional resources in an effective manner.

Some limitations of the study need to be addressed. Since the study was conducted in the setting where the curriculum was set by the university, and the data were analyzed in a post-hoc manner, the authors were not able to make a finer level of specification on reading tests in different conditions. As discussed in the second pedagogical implication regarding a state perspective of reading strategy use, "what to use when" appears to be critical in the effective reading strategy use. If a goal is to provide more concrete guidelines for better reading strategy instruction, the features of reading texts that make reading more difficult or less need to be laid out and systematically incorporated into the instrument. Another limitation of the study is that the reliabilities of two instruments were relatively low. The sample sizes in two of the English reading groups were small as well; 24 for ER&W-mid and 28 for IE-final. Considering the limitations of the present study but the importance of the issue investigated, further studies need to be conducted. A new direction for study is to develop the specification on features of reading tasks in relation to readers' relative L2 proficiency and to investigate individual reading strategies in the contextualized and specified reading conditions. This will lead to a more accurate description on how L2 readers of varying degrees of L2 proficiency can use different reading strategies in reading tasks with different features and varying degrees of difficulty.

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*Table 1: The specification of reading comprehension tests*

| | Number of Passages | Main Ideas | Detail/ Inference | Trans ition | Vocabulary in context | Organizati on | Total |
|---|---|---|---|---|---|---|---|
| English Reading & Writing (Mid) | 10 (longest, 326 words; shortest, 106 words) | 4 | 11 | 5 | 10 | | 30 |
| Integrative English (Mid) | 6 (longest, 379 words; shortest, 167 words) | 3 | 11 | 2 | 4 | | 20 |
| Integrative English (Final) | 9 (longest, 387 words; shortest, 95 words) | 3 | 12 | 1 | 4 | | 20 |
| L1 Reading comprehension | 13 (longest, 404 words; shortest, 85 words) | 8 | 14 | | | 3 | 25 |

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*Table 3: Means and standard deviations of reading comprehension tests*

|  | Total | ER&W Mid-term | IE Mid-term | IE Final Exam |
|---|---|---|---|---|
| English Reading |  | 21.92 (3.61) (N=24; Max. 30) | 15.98 (2.33) (N=49; Max. 20) | 15.75 (3.45) (N=28; Max.20) |
| Korean Reading | 16.91 (2.92) (N=101 Max. 25) | 17.67 (3.19) (N=24; Max.25) | 16.98 (2.87) (N=49; Max.25) | 16.14 (2.68) (N=28; Max.25) |

*Max. indicates a maximum score of each test. The value in parentheses indicates standard deviation.*

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*Table 4: The Relative Contributions of Reading Strategies to L2 Reading in Different Conditions*

| | Model Summary | | r between |
|---|---|---|---|
| | Predictors | $R^2$ | L1 & L2 Reading |
| KRC (n=101) | Items 16, 17 | **.08*** (.0170) | |
| ER&W-mid (n=24) | Items 4, 11, 30 | **.590*** (p=.000) | **.500*** (p=.013) |
| IE-mid (n=49) | Item 6, 24 | **.162*** (p=.017) | .090n.s. (p=.537) |
| IE-final (n=28) | Items 3, 22,27 | **.610*** (p=.000) | **.542*** (p=.003) |

*Note that the L1 reading group is the total of three English reading groups.*

*Item03: I thought about what I knew to help me understand what I was reading.*

*Item04: I previewed the text to see what it was about before reading it.*

*Item06: I tried to picture or visualize information to help me understand the text.*

*Item11: I adjusted my reading speed according to what I was reading.*

*Item16: I used context clues like transitions to help me better understand what I was reading.*

*Item17: I tried to visualize the content to understand the difficult part.*

*Item22: When text became difficult, I reread to increase my understanding.*

*Item24: When I encountered unknown words or phrases, I tried to pronounce the words.*

*Item27: I tried to parse the difficult parts into phrases or clauses.*

*Item30: I tried to understand the content by distinguishing the main clause from the subordinate clause.*

*Table 5: Hierarchical multiples regression analyses predicting L2 reading comprehension from L1 reading and L2 reading strategies*

| Predictor | Language threshold | | | | Non-language threshold | |
| | IE-mid | | ER&W-mid | | IE-final | |
| | $\Delta R^2$ | β | $\Delta R^2$ | β | $\Delta R^2$ | β |
|---|---|---|---|---|---|---|
| Step 1 | .008 | | .250* | | .293* | |
| L1 reading | | .09 | | .50* | | .542* |
| Step 2 | .164* | | .432*** | | .367*** | |
| L2 reading | | -.345* | | .330* | | .387* |
| strategies | | .317* | | .550*** | | -.331* |
| | | | | -.367* | | .409* |
| Total $R^2$ | .172* | | .682*** | | .660*** | |
| *n* | 49 | | 24 | | 28 | |

*\* P < .05   \*\*\* P < .001*

*Note: The predictors in Step2 are item6 &24 for IE-mid, items 4,11&30 for ER&W-mid, and items 3,22&27 for IE-final.*

*Table 6: The results of paired-samples t-tests: The differences between L1 and L2 reading strategy use in the language threshold condition and the non-language threshold condition*

| | ER&W-mid | | IE-final | | IE-mid | |
|---|---|---|---|---|---|---|
| | Mean diff. | Sig. value | Mean diff. | Sig. value | Mean diff. | Sig. value |
| CS01 | 0.35 | .188 | 0.07 | .752 | -0.31 | .062 |
| CS 02 | 0.33 | .103 | 0.07 | .738 | 0.61 | .003 |
| CS 03 | 0.08 | .704 | 0.14 | .581 | 0.45 | .017 |
| CS 04 | 0.96 | .003 | -0.11 | .713 | 0.41 | .032 |
| CS 05 | **0.96** | **.000*** | *0.75* | *.003* | 0.71 | .006 |
| CS 06 | -0.17 | .528 | 0.18 | .456 | -0.24 | .159 |
| MS 07 | 0.08 | .714 | -0.11 | .631 | 0.16 | .330 |
| CS 08 | 0.04 | .880 | -0.18 | .551 | -0.45 | .025 |
| MS 09 | 0.08 | .647 | -0.11 | .477 | 0.39 | .021 |
| CS 10 | 0.33 | .073 | 0.29 | .284 | 0.04 | .834 |
| CS 11 | 0.46 | .038 | -0.18 | .466 | 0.16 | .272 |
| CS 12 | 0.38 | .153 | -0.21 | .386 | -0.24 | .129 |
| MS 13 | 0.25 | .207 | 0.07 | .702 | 0.12 | .436 |
| CS 14 | 0.04 | .870 | 0.25 | .270 | 0.00 | 1.000 |
| MS 15 | 0.29 | .200 | 0.43 | .083 | 0.08 | .591 |
| CS 16 | 0.38 | .195 | 0.68 | .008 | 0.04 | .799 |
| MS 17 | -0.04 | .904 | 0.25 | .257 | -0.29 | .137 |
| CS 18 | -0.38 | .185 | 0.04 | .857 | **-0.61** | **.000*** |
| CS 19 | 0.00 | 1.000 | 0.46 | .091 | -0.16 | .455 |
| MS 20 | -0.04 | .833 | 0.43 | .069 | 0.40 | .027 |
| CS 21 | 0.33 | .043 | 0.43 | .016 | 0.27 | .124 |
| MS 22 | 0.00 | 1.000 | 0.11 | .621 | 0.16 | .272 |
| MS23 | 0.00 | 1.000 | | | | |

Mean diff. : L2 reading strategy – L1 reading strategy

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*Table 2: Means and standard deviations of reading strategy questionnaires*

| | ERS Total N=220 | KRS Total N=158 | ERS ER&W N=24 | KRS ER&W N=24 | ERS IE-Mid N=49 | KRS IE-Mid N=49 | ERS IE-Final N=28 | KRS IE-Final N=28 |
|---|---|---|---|---|---|---|---|---|
| **Item01** | I had a purpose in mind when I read. | | | | | | | |
| CS | 3.58 | 3.64 | 4.00 | 3.63 | 3.55 | 3.86 | 3.46 | 3.39 |
| | (1.02) | (1.00) | (0.85) | (0.92) | (1.06) | (1.06) | (1.00) | (1.07) |
| **Item02** | I took notes while reading to help me understand what I was reading. | | | | | | | |
| CS | 2.47 | 2.13 | 2.33 | 2.00 | 2.73 | 2.12 | 2.07 | 2.00 |
| | (1.18) | (1.10) | (1.01) | (0.88) | (1.24) | (1.09) | (0.90) | (1.09) |
| **Item03** | I thought about what I knew to help me understand what I was reading. | | | | | | | |
| CS | 3.60 | 3.43 | 3.79 | 3.71 | 3.80 | 3.35 | 3.68 | 3.54 |
| | (1.07) | (0.95) | (1.02) | (1.00) | (0.96) | (0.95) | (0.90) | (1.10) |
| **Item04** | I previewed the text to see what it was about before reading it. | | | | | | | |
| CS | 3.60 | 3.29 | 3.96 | 3.00 | 3.80 | 3.39 | 3.36 | 3.46 |
| | (1.09) | (1.15) | (0.92) | (1.29) | (1.10) | (1.02) | (0.99) | (1.26) |
| **Item05** | When the text became difficult, I read aloud to help me understand what I was reading. | | | | | | | |
| CS | 3.06 | 2.12 | 2.88 | 1.92 | 2.94 | 2.22 | 2.50 | 1.75 |
| | (1.42) | (1.21) | (1.39) | (1.06) | (1.45) | (1.21) | (1.04) | (1.00) |
| **Item06** | I tried to picture or visualize information to help me understand the text. | | | | | | | |
| CS | 2.67 | 2.78 | 3.04 | 3.21 | 2.41 | 2.65 | 2.86 | 2.68 |
| | (1.14) | (1.17) | (1.16) | (1.28) | (1.14) | (1.11) | (0.97) | (1.12) |
| **Item07** | I tried to make sure that I understood the text correctly. | | | | | | | |
| MS | 3.21 | 3.59 | 3.75 | 3.67 | 3.73 | 3.57 | 3.43 | 3.54 |
| | (1.11) | (0.94) | (0.85) | (0.82) | (0.81) | (1.02) | (0.88) | (1.10) |
| **Item08** | I skimmed the text first by noting characteristics like length and organization. | | | | | | | |
| CS | 4.00 | 3.39 | 3.33 | 3.29 | 3.16 | 3.61 | 3.43 | 3.61 |
| | (1.12) | (1.15) | (1.17) | (1.12) | (1.11) | (1.17) | (1.07) | (1.10) |
| **Item09** | I tried to get back on track when I lost concentration. | | | | | | | |
| MS | 3.66 | 3.95 | 4.04 | 3.96 | 4.24 | 3.86 | 4.11 | 4.21 |
| | (1.06) | (0.82) | (0.69) | (0.75) | (0.95) | (0.82) | (0.74) | (0.57) |
| **Item10** | I underlined or circled information in the text to help me remember. | | | | | | | |
| CS | 3.93 | 3.75 | 4.13 | 3.79 | 4.00 | 3.96 | 3.54 | 3.25 |
| | (1.00) | (1.35) | (1.03) | (1.44) | (1.15) | (1.31) | (1.23) | (1.48) |
| **Item11** | I adjusted my reading speed according to what I was reading. | | | | | | | |
| MS | 3.70 | 3.75 | 4.29 | 3.83 | 3.96 | 3.80 | 3.50 | 3.68 |
| | (0.95) | (0.97) | (0.91) | (0.96) | (1.08) | (0.87) | (1.07) | (1.16) |
| **Item12** | I decided what to read closely and what to ignore. | | | | | | | |
| CS | 3.09 | 3.78 | 4.00 | 3.63 | 3.65 | 3.90 | 3.64 | 3.86 |
| | (1.00) | (1.04) | (1.02) | (1.28) | (1.05) | (0.98) | (1.03) | (1.08) |
| **Item13** | When the text became difficult, I began to pay closer attention to what I was reading. | | | | | | | |
| MS | 3.47 | 4.02 | 4.33 | 4.08 | 4.12 | 4.00 | 4.00 | 3.93 |
| | (1.10) | ().86) | (0.82) | (1.06) | (0.83) | (0.84) | (0.98) | (0.77) |
| **Item14** | I read the questions prior to the main passage for better understanding. | | | | | | | |
| CS | 3.99 | 3.74 | 4.04 | 4.00 | 3.96 | 3.96 | 3.82 | 3.57 |
| | (0.77) | (1.16) | (0.86) | (1.02) | (0.98) | (1.10) | (0.94) | (1.17) |
| **Item15** | I stopped from time to time to think about what I was reading. | | | | | | | |
| MS | 3.69 | 3.03 | 3.29 | 3.00 | 3.33 | 3.24 | 3.36 | 2.93 |
| | (0.86) | (0.99) | (0.86) | (0.93) | (1.05) | (0.99) | (0.87) | (1.12) |
| **Item16** | I used context clues like transitions to help me better understand what I was reading. | | | | | | | |
| CS | 4.09 | 3.41 | 3.88 | 3.50 | 3.63 | 3.59 | 3.82 | 3.14 |
| | (0.83) | (1.03) | (0.85) | (1.18) | (0.91) | (1.04) | (1.02) | (1.11) |
| **Item17** | I tried to visualize the content to understand the difficult part. | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MS | 3.80 | 2.79 | 3.08 | 3.13 | 2.49 | 2.78 | 2.86 | 2.61 |
| | (1.16) | (1.10) | (1.32) | (1.30) | (0.96) | (1.10) | (0.80) | (1.13) |

Item18  I critically analyzed and evaluated the information presented in the text.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CS | 4.09 | 3.32 | 3.25 | 3.63 | 2.90 | 3.51 | 3.11 | 3.07 |
| | (0.91) | (1.02) | (0.94) | (1.21) | (0.92) | (0.94) | (0.99) | (0.90) |

Item19  I went back and forth in the text to find relationships among ideas in it.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CS | 3.37 | 3.31 | 3.50 | 3.50 | 3.51 | 3.67 | 3.50 | 3.04 |
| | (1.03) | (1.19) | (0.98) | (1.10) | (1.06) | (1.16) | (1.26) | (1.17) |

Item20  I checked my understanding when I came across conflicting information.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MS | 2.72 | 3.59 | 3.79 | 3.83 | 3.96 | 3.57 | 3.79 | 3.36 |
| | (1.04) | (0.94) | (0.78) | (1.09) | (0.80) | (0.91) | (0.79) | (1.06) |

Item21  I tried to remember what the text was about when reading.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CS | 3.85 | 3.68 | 4.29 | 3.96 | 3.96 | 3.69 | 3.89 | 3.46 |
| | (0.81) | (0.91) | (0.69) | (0.62) | (0.82) | (0.94) | (0.63) | (1.00) |

Item22  When text became difficult, I reread to increase my understanding.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MS | 4.05 | 3.87 | 4.17 | 4.17 | 4.12 | 3.96 | 4.07 | 3.96 |
| | (0.89) | (0.96) | (0.70) | (0.92) | (0.81) | (0.93) | (0.86) | (0.96) |

Item23  I tried to understand the difficult part in the text by using the topic and organization.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MS | 3.58 | 3.58 | 3.75 | 3.75 | 3.73 | 3.55 | 3.71 | 3.46 |
| | (0.84) | (0.98) | (0.94) | (0.99) | (0.78) | (0.94) | (0.76) | (1.17) |

Item24  When I encountered unknown words or phrases, I tried to pronounce the words.

| | | | | | |
|---|---|---|---|---|---|
| LL | 3.05 | | 3.42 | 2.94 | 2.86 |
| | (1.36) | | (1.14) | (1.39) | (1.30) |

Item25  I tried to guess the meaning of an unknown word by using the clues like prefix or suffix (e.g., dislike, happiness) of the word.

| | | | | | |
|---|---|---|---|---|---|
| LL | 3.76 | | 4.00 | 3.84 | 3.71 |
| | (1.15) | | (1.02) | (0.87) | (0.76) |

Item26  I tried to guess the meaning of an unknown word by using the part of speech (e.g., nouns, verbs, adjectives) of the word.

| | | | | | |
|---|---|---|---|---|---|
| LL | 3.57 | | 3.71 | 3.71 | 3.25 |
| | (1.12) | | (1.00) | (0.91) | (1.08) |

Item27  I tried to parse the difficult parts into phrases or clauses.

| | | | | | |
|---|---|---|---|---|---|
| LL | 3.79 | | 3.79 | 3.73 | 3.61 |
| | (1.11) | | (1.22) | (0.95) | (1.31) |

Item28  I tried to guess the meaning of an unknown word by remembering the similar words.

| | | | | | |
|---|---|---|---|---|---|
| LL | 3.75 | | 4.00 | 3.71 | 3.75 |
| | (1.04) | | (1.25) | (0.94) | (1.17) |

Item29  I checked the guessed meaning of unknown words by using the overall context.

| | | | | | |
|---|---|---|---|---|---|
| HL | 3.90 | | 4.21 | 4.00 | 3.82 |
| | (0.86) | | (0.72) | (0.76) | (0.94) |

Item30  I tried to understand the content by distinguishing the main clause from the subordinate clause.

| | | | | | |
|---|---|---|---|---|---|
| HL | 3.52 | | 3.71 | 3.55 | 3.21 |
| | (1.08) | | (1.04) | (0.87) | (1.29) |

Item31  When I tried to guess the meaning of an unknown word, I tried to judge whether the word was important in the overall context.

| | | | | | |
|---|---|---|---|---|---|
| HL | 3.41 | | 3.33 | 3.47 | 3.36 |
| | (1.00) | | (0.96) | (0.98) | (1.10) |

Item32  I tried to translate the difficult sentence into Korean for better understanding.

| | | | | | |
|---|---|---|---|---|---|
| HL | 2.22 | | 2.13 | 2.24 | 2.07 |
| | (1.27) | | (1.12) | (1.20) | (1.21) |

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