

# Korean EFL University Students' English Reading Strategy Use

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**Kim, Nam Hee & Jung, Mie Ae. 2011. Korean EFL University Students' English Reading Strategy Use.** *The Linguistic Association of Korea Journal*. 19(4). 43-66. This study aims to investigate English reading strategy used by Korean university students and the relationship between English reading strategy use and reading proficiency. The participants were 131 Korean university students who were studying English at four different universities in Korea. They responded to the questionnaires concerning techniques that students use when reading academic materials in English and took an English reading comprehension test. The findings indicated that (a) students tended to use global and support reading strategies moderately, while using problem-solving strategies with high frequency and that (b) there were significant differences in overall reading strategy use between high and low proficiency readers. Pedagogical implications for strategy instruction were suggested.

**Key Words:** reading strategies, metacognitive strategies, reading comprehension, reading proficiency, strategy instruction

## 1. Introduction

The purpose of reading is comprehension, or to get meaning from written text. To comprehend, students need to monitor their reading and to know what to do when they face difficulties. It appears that how well students develop the ability to comprehend what they read has a profound effect on their entire lives.

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Considering the academic tendencies currently prevalent in Korean universities, it seems to be clear that students need to possess enough English reading skills in order to succeed in their studies. Universities in Korea make great efforts to ensure their students' high English proficiency. To achieve this goal, many academic courses tend to select authentic books originally written in English as textbooks rather than books translated into Korean. In particular, students' English reading comprehension ability is now an essential component for their academic success, especially in comprehending the academic English used in their textbooks. However, even though students have to read a large volume of academic texts in English, many of them entering universities are unprepared for the reading demands placed on them. They may show an inability to read selectively, to extract what is important for the purpose of reading, or to discard what is insignificant. Students often select ineffective and inefficient strategies with little intent (Wood, Motz, & Willoughby, 1998).

In the field of reading, a number of cognitive scientists focused their attention on how readers construct meaning as they read. Specifically, they studied mental activities that good readers engage in to achieve comprehension. From these studies an entirely new concept emerged about what reading is. According to the concept, reading is a complex, active process of constructing meaning-not skill application (Dole et al., 1991). For the L2 learner, however, reading in L2 requires higher degrees of analyzed linguistic knowledge and cognitive control than does reading in their L1 and syntactic processes are less automatized in L2 than in L1. Research has demonstrated that reading in L2 is a dynamic and interactive process by which learners make use of background knowledge, text schema, lexical and grammatical awareness, and personal purposes and goals in order to understand written material.

The key element of proficient reading is to be strategic. Therefore, to examine reading strategy use is essential to understand students' current state of their strategy use and to help students develop reading strategies they must have if they are to become competent and effective readers. Teachers need to assess what students know about how reading is supposed to work and what they do to monitor or regulate their own comprehension. Administering strategy use questionnaires could help teachers to identify which specific strategies are least known to their students.

The primary purpose of the study is to explore Korean university students' use of reading strategies when they read academic texts in English. The present study also aims to examine how the students' use of reading strategies is related to their reading proficiency. The research questions of the current study are as follows:

1. What reading strategies do Korean EFL university readers frequently use?
2. Are there any differences among high, intermediate, and low proficiency students in their strategy choice and frequency of reading strategy use?

## 2. Reading Strategies and Reading Proficiency

Research into the characteristics of good language learners' learning is very important because it provides the teachers with important pedagogical implications for poor learners (Rubin, 1975).

When good readers struggle with text, they know what to do to get out of trouble. When a text becomes confusing, good readers recognize that they have a repertoire of reading strategies that they can use to work themselves out of the difficulty. Poor readers, however, have trouble figuring out what to do (Vacca et al., 2004).

Proficient readers "draw on past experience to develop a plan for reading, consciously check their comprehension and revise the plan if necessary, monitor and recognize when difficulties occur, consciously use knowledge about reading to identify the source of difficulties, and use appropriate repair strategies to correct problems" (Rycik & Irvin, 2005, p. 28). Good readers connect the meaning of one sentence to the meaning of another. If something is confusing to them, they use their background knowledge to try to clarify the meanings of words and phrases. Sometimes good readers interact with the text by asking themselves questions about its content and reflecting on its ideas. Good readers continually evaluate their predictions and revise them as needed (Paris et al., 1991). Good readers are also selective as they read. They are likely to focus more of their attention on the parts of the text that are most closely tied to their reading goals. On the other hand, they may decide to reread a passage or

chapter before going on. They also may summarize the content of a passage as they read it.

How do poor readers differ from good readers? Poor readers seem to be quite the opposite of good readers. For instance, struggling readers often begin to read without setting goals (Pressley & Afflerbach, 1995). During reading, they may have difficulty decoding and so have difficulty reading the words of their texts accurately (Adams, 1990). Poor readers often lack sufficient background knowledge about the topic of a text or they frequently are not able to activate it to help them understand what they have read. They often are not familiar with the vocabulary they encounter, and have trouble determining word meanings.

It has been argued that metacognitive strategies are important in a reader's language learning. Flavell introduced the concept of metacognition as one's ability to understand, control and manipulate his or her own cognitive process to maximize learning (Flavell, 1971). Flavell also stated that metacognition consists of both "knowledge of cognition" and "regulation of cognition" (p. 232). Metacognition includes monitoring, regulation, and orchestration (checking, planning, selecting, and inferring) (Brown & Campione, 1980); self-interrogation and introspection (Brown, 1978); and interpretation of ongoing experience (Flavell & Wellman, 1977). Harris & Hodges (1995) also mentioned that metacognition is "awareness and knowledge of one's mental processes such that one can monitor, regulate, and direct them as a desired end, self-mediation" (p. 153). O'Malley and Chamot (1990) emphasized that "students without metacognitive approaches are learners without direction or opportunity to plan their learning, monitor their progress, or review their accomplishments and future learning directions" (p. 8). Vandergrift (2002) mentioned that "metacognitive strategies are crucial because they oversee, regulate, or direct the language learning task, and involve thinking about the learning process" (p. 599).

The relationship between reading comprehension ability and metacognitive reading strategy use has been investigated. For instance, Sheorey and Mokhtari (2001) investigated the differences in metacognitive awareness and perceived strategy use among ESL students. Mokhtari and Sheorey (2002) developed the survey of reading strategies (SORS) to classify reading strategies. SORS consists of three subcategories: (a) global reading strategies, which are generalized or

global reading strategies aimed at setting the stage for the reading act, (b) problem-solving strategies, which are localized, focused problem-solving or repair strategies, and (c) support strategies, which involve using the support mechanisms or tools aimed at sustaining responsiveness to reading. The results showed that high ability readers reported a higher level of metacognitive awareness and strategy use than low ability readers. They concluded that the relationship between students' reading ability and metacognitive strategy use was related and skilled readers are more able to reflect on and monitor their cognitive processes while reading.

Phakiti (2003) found that there was a positive relationship between the use of metacognitive reading strategies and the English reading test performance among EFL university students. The most successful readers reported the highest number of metacognitive strategy use and the least successful students reported the least number of strategy use. Wu (2005) investigated differences of metacognitive reading strategy use among Taiwanese EFL college students by using SORS. The results showed that more proficient readers used more overall metacognitive reading strategies than less proficient readers while reading in English. Zhang and Wu (2009) also investigated metacognitive awareness and reading strategy use of Chinese EFL senior high school students. The results showed that the high proficiency group reported more frequent strategy use than the intermediate and low proficiency groups in overall strategy use.

Having surveyed about the importance of reading strategies and their impact on learning, and considering that few studies have been done in relation to English reading proficiency, the present study serves to contribute to our understanding of reading strategies that Korean university students use while reading English texts.

### 3. Methods

#### 3.1. Participants

The participants of this study were students at four different universities in Korea. The data was collected from 153 students enrolled in general English reading courses. However, 131 (66 male and 65 female) participants with

completed data were accepted in the study after removing the participants who did not complete the surveys. The participants' average age was 20 years old, ranging from 19 to 34 years of age. The description of the participants is presented in Table 1.

Table 1. Description of the Participants

		N (%)	Total (%)
University	A	25 (19.1)	131 (100.0)
	B	44 (33.6)	
	C	37 (28.2)	
	D	25 (19.1)	
Academic Year	1	97 (74.1)	131 (100.0)
	2	16 (12.2)	
	3	8 (6.1)	
	4	10 (7.6)	

### 3.2. Instruments

Two instruments were used in this study: The Survey of Reading Strategies (SORS) and an English reading proficiency test.

**Survey of Reading Strategies (SORS):** The Survey of Reading Strategies developed by Mokhtari and Sheorey (2002) was used in order to measure readers' reading strategy use when reading academic materials in English. SORS consists of 30 items, which are subdivided into three categories: global reading strategies (13 items), problem solving strategies (8 items), and support strategies (9 items). The internal reliability coefficients (Cronbach's alpha) for the three strategy categories in the present study were: Global ( $\alpha = .82$ ), problem-solving ( $\alpha = .77$ ), and support ( $\alpha = .63$ ). The overall reliability coefficient was .91. The questionnaire allowed participants to mark strategy use on a 5-point Likert scale. The overall average indicates how often you use reading strategies when reading academic materials. Mokhtari and Sheorey (2002) state that scores of 2.4 or below demonstrate low strategy use, 2.5 to 3.4 show moderate strategy use, and 3.5 or above signifies high strategy use.

**English reading proficiency test:** Students were given an English reading proficiency test to measure the participants' English reading proficiencies.

The test consisted of 30 questions with four alternative multiple-choices adopted from the reading comprehension sections provided in several practical TOEFL reading tests.

### 3.3. Data Collection and Analysis

The questionnaires were administered during regular class hours. Following brief instruction, participants were asked to take the reading proficiency test for 30 minutes. Students were also asked to complete the questionnaires within fifteen minutes. The data from the questionnaires were analyzed using the Statistical Package for Social Sciences (SPSS) 18.0 for Windows. Descriptive statistics were used to find out frequencies, percentages, means and standard deviations. Cronbach's alpha reliabilities were used to calculate the reliability coefficients. Pearson Correlations were used to examine correlations between different parameters. The paired t-tests were employed to find out differences between two variables. One-way ANOVA tests were used to examine group differences.

## 4. Results

### 4.1. Reading Strategy Use

In order to answer the first research question (What reading strategies do Korean EFL university readers frequently use?), the overall pattern of reading strategies used by the participants was investigated.

Table 2 shows the means, standard deviations and levels of frequencies of strategy use (high ( $M \geq 3.5$ ), moderate ( $2.5 \leq M < 3.5$ ), and low ( $M < 2.5$ )). Numbers were rounded up when levels were evaluated.

Table 2. Subscales of the Reading Strategies

Category	Mean	SD	Level
Problem Solving	3.55	.73	High
Support	3.29	.61	Moderate
Global	3.17	.64	Moderate
Overall	3.34	.57	Moderate

The results showed that students used support and global strategies with moderate frequency, while they used problem-solving strategies with high frequency. Overall, students used reading strategies with moderate frequency.

The top five and bottom five strategies used by the participants were shown in Table 3. The mean score of the most frequently used strategy was 3.99 (using reference materials), while the mean score of the least frequently used strategy was 2.31 (asking oneself questions).

Table 3. Top Five and Bottom Five Strategies

Category	Strategy	Mean	SD
Support	Using reference materials	3.99	1.19
Problem-solving	Re-reading for better understanding	3.98	1.16
Problem-solving	Paying close attention to reading	3.95	1.21
Problem-solving	Trying to stay focused	3.76	1.25
Support	Underlining information in the text	3.75	1.24
Global	Confirming predictions	2.89	1.17
Global	Checking how text content fits purpose	2.88	1.02
Problem-solving	Visualizing information read	2.47	1.34
Global	Analyzing and evaluating the text	2.31	1.18
Support	Asking oneself questions	2.31	1.25

As seen in Table 3 above, the top five strategies included two were support and the other three were problem-solving strategies, while the bottom five strategies included three global strategies, one support and one problem-solving strategy.

Table 4 shows that two of the 13 global strategies fell in the high usage category. One strategy was included in the low level category, while the remaining 10 strategies fell in the moderate level category. The results also show that while students tend to use text features and context clues with high frequency, they were unlikely to analyze and evaluate the text when reading in English.



Table 4. Global Reading Strategies

Item	Strategy	Mean	SD	Level
7	Using text features (tables, figures, pictures)	3.72	1.20	High
8	Using context clues	3.65	1.09	High
11	Checking understanding	3.40	1.02	Moderate
3	Previewing text before reading	3.38	1.17	Moderate
5	Noting text characteristics	3.35	1.20	Moderate
12	Predicting or guessing text meaning	3.30	1.10	Moderate
2	Using background knowledge	3.28	1.06	Moderate
9	Using typographical aids (boldfaces, italics)	3.12	1.31	Moderate
1	Setting purpose for reading	3.05	1.14	Moderate
6	Determining what to read closely	2.94	1.21	Moderate
13	Confirming predictions	2.89	1.17	Moderate
4	Checking how text content fits purpose	2.88	1.02	Moderate
10	Analyzing and evaluating the text	2.31	1.18	Low
Overall Global		3.17	.64	Moderate

Table 5 below shows the support strategies. The mean scores ranged from 2.31 to 3.99. Among the 9 support strategies, four strategies fell in the high usage category, one strategy in the low usage category and the remaining four strategies in the moderate level.

The most frequently used support strategy was “using reference materials,” showing that students tend to look up words in dictionaries when facing unknown vocabulary. On the other hand, students were unlikely to create and answer questions about a text.

Table 5. Support Reading Strategies

Item	Support Strategy	Mean	SD	Level
4	Using reference materials	3.99	1.19	High
3	Underlining/circling information in the text	3.75	1.24	High
6	Finding relationship among text	3.53	1.08	High
8	Translating from English into Korean	3.47	1.29	High
9	Thinking in both languages when reading	3.38	1.12	Moderate
2	Reading aloud for better understanding	3.26	1.27	Moderate
5	Paraphrasing for better understanding	2.99	1.28	Moderate
1	Taking notes while reading	2.89	1.25	Moderate
7	Asking oneself question	2.31	1.25	Low
Overall Support		3.26	.61	Moderate

Table 6 below shows the problem-solving strategies. The mean scores ranged from 2.47 to 3.98. Six strategies were identified as the high level, and two strategies as the moderate level. There was no problem-solving strategy which fell in the low usage category.

Table 6. Problem Solving Reading Strategies

Item	Problem-solving Strategy	Mean	SD	Level
7	Re-reading for better understanding	3.98	1.16	High
4	Paying close attention to reading	3.95	1.21	High
2	Trying to stay focused	3.76	1.25	High
1	Reading slowly and carefully	3.69	1.13	High
8	Guessing meaning of unknown words	3.63	1.04	High
3	Adjusting reading rate	3.45	1.19	High
5	Pausing and thinking about reading	3.43	1.09	Moderate
6	Visualizing information read	2.47	1.34	Moderate
Overall Problem-solving		3.55	.73	High

Table 6 shows that students are conscious of their comprehension process and likely to be apt to use the localized, focused techniques when they face problems in order to understand texts (e.g., rereading, paying close attention, focusing, reading slowly and carefully, or guessing). However, they are less apt to pause and think about reading or visualize information.

As shown thus far, the findings revealed that among 30 strategies, 12 strategies were used with high frequency ( $M \geq 3.5$ ) and two strategies were used with low frequency ( $M < 2.5$ ). The remaining 16 strategies fell in the moderate usage category ( $2.5 \leq M < 3.5$ ).

#### 4.2. English Reading Proficiency and Reading Strategy Use

In order to answer the second research question (differences in reading strategy use among students with high, intermediate, and low English reading proficiency), the participants were divided into three proficiency groups depending on their reading comprehension test scores. Students scoring 75% or above on the test (i.e., above 21 out of 30) were classified as high; students who obtained scores of 25% or below (i.e., below 12) were classified as low. Those

who obtained scores between 13 and 20 were included in the intermediate group.

Table 7 shows students' reading comprehension achievement levels with descriptive statistics of the reading comprehension test.

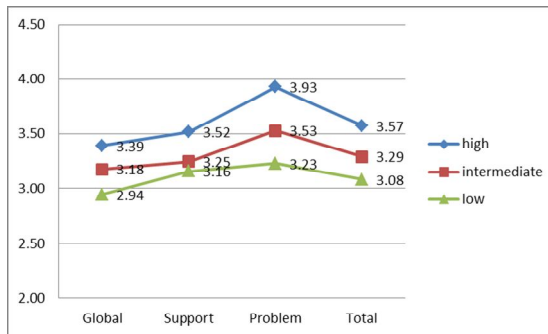
Table 7. Statistics of the Participants' English Reading Proficiency

Proficiency Level	Total	Male	Female	Test Scores			
	N (%)	N	N	Min.	Max.	Mean	SD
low	29 (22.1)	15	14	5	12	9.76	1.98
intermediate	74 (56.5)	40	34	13	20	16.80	2.35
high	28 (21.4)	11	17	21	27	23.04	1.67
Total	131 (100.0)	66	65	5	27	16.57	4.89

The overall mean score was 16.57 (SD=4.89) with the maximum of 27 and the minimum of 5 out of 30. The low, intermediate and high proficiency groups included 29, 74, and 28 students, respectively.

As seen in Figure 1, there were strategy use differences among the three proficiency groups. Higher proficiency students tend to use metacognitive strategies more frequently than lower proficiency groups.

Figure 1. Frequencies of Strategy Use by English Reading Proficiency Level



One-way ANOVA test results revealed that there were significant differences in overall strategy use among groups ( $F=5.29, p=.00$ ). The post-hoc Tukey tests indicated that significant differences were found between the high and low proficiency groups. Considering the global strategies, the post-hoc Tukey tests, which followed a one-way ANOVA ( $F=3.58, p=.03$ ), showed that there were

significant differences between the high and low proficiency students. In problem-solving strategy use, the post-hoc Tukey tests, which followed one-way ANOVA results ( $F=5.29$ ,  $p=.000$ ), showed that there were significant differences between the high and low proficiency students. No significant differences, however, were found in support strategies among groups ( $F=2.81$ ,  $p=.06$ ).

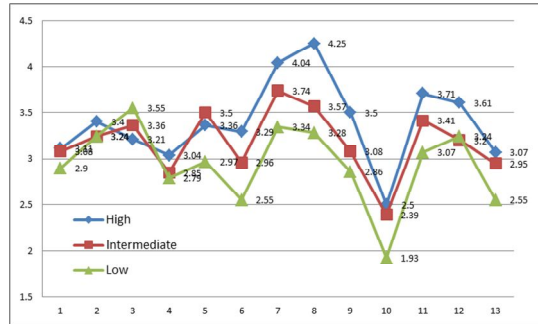
Considering the global, support and problem-solving strategies within each proficiency level, each proficiency group showed a clear preference to using problem-solving strategies, followed by support strategies and global strategies.

The mean scores of strategies by the low-proficiency group showed significant differences between the global and the problem-solving strategies ( $t=-2.24$ ,  $p=.033$ ) and between the global and the support strategies ( $t=-2.25$ ,  $p=.033$ ). No significant differences were found between the support and the problem-solving strategies ( $t=.65$ ,  $p=.524$ ). The mean scores of strategies by the intermediate-proficiency group showed significant differences between the global and the problem-solving strategies ( $t=-4.68$ ,  $p=.000$ ), and between the support and the problem-solving strategies ( $t=-4.00$ ,  $p=.000$ ). There were no significant differences between the global and the support strategies ( $t=-1.13$ ,  $p=.264$ ). The mean scores of strategies by the high-proficiency group differed significantly between the global and the problem-solving strategies ( $t=-4.92$ ,  $p=.000$ ) and between the problem-solving and the support ( $t=-4.72$ ,  $p=.000$ ). No significant differences were found between the global and the support strategies ( $t=-1.39$ ,  $p=.177$ ).

When individual strategies of the three strategy categories are considered, the low, intermediate and high level readers differ in strategy use as seen in Figure 2, 3 and 4 below.

As seen in Figure 2, students with high reading proficiency show that they use global strategies more frequently than the lower proficiency groups. Overall, the higher reading proficiency, the more frequently they use global strategies.

Figure 2, Frequency of Global Strategies by Proficiency Level

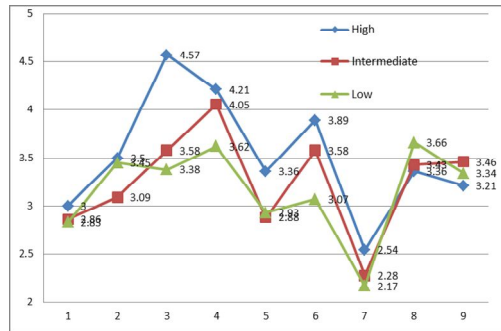


One remarkable fact is that for all three proficiency groups, there was a sharp drop at global strategy 10 (“Analyzing and evaluating the information presented in the text”). Students rarely analyze and evaluate the information in the text, no matter which proficiency level they belong to.

One-way ANOVAs and post-hoc Tukey tests compared the three groups with each other and showed where the differences could be found. Considering global strategies, significant differences were found in two strategies. In the strategy 8 (“Using context clues”), a one-way ANOVA result indicated a significant difference among groups ( $F=6.64$ ,  $p=.00$ ). The post-hoc Tukey test results showed that significant differences were found between high and low proficiency groups and between high and intermediate proficiency groups. In the strategy 11 (“Checking understanding”), a significant difference was found among groups ( $F=2.94$ ,  $p=.05$ ). The post-hoc Tukey test results showed that the differences between high and low proficiency groups were significant.

Figure 3 below depicts students’ means of support strategy use depending on their proficiency levels. Overall, high level students showed more frequent support strategy use than the other lower level readers.

Figure 3. Frequency of Support Strategies by Proficiency Level

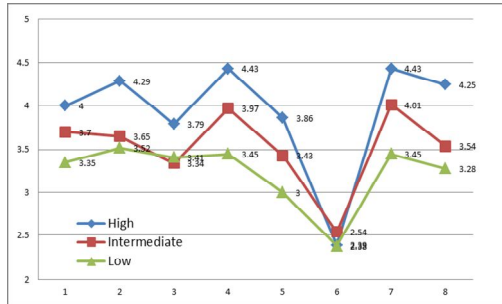


Seven out of 9 support strategies were reported to be used more frequently by the high level readers than by the lower level groups of students. However, strategy 8 (“Translating from English into Korean”) was more frequently used by low and intermediate groups than the high level group. For all three proficiency groups, there was a sharp drop at strategy 7 (“Asking oneself questions one likes to have answered in the text”). Students are unlikely to interact with the text by asking themselves questions about its content and reflecting on its ideas.

Significant differences in support strategy use among the three proficiency levels were found in strategy 3 (“Underlining/circling information in the text to help one remember it”) ( $F=9.10$ ,  $p=.000$ ) between high and low level readers and between high and intermediate readers. Support strategy 6 (“Going back and forth in the text to find relationships among ideas in it”) was also significantly different ( $F=4.57$ ,  $p=.001$ ) between high and low level groups.

Considering the problem-solving strategies, the low, intermediate and high proficiency readers differed in their strategy use frequency. The high proficiency group tended to use problem-solving strategies more frequently than the lower proficiency readers.

Figure 4. Frequency of Problem-solving Strategies by Proficiency Level



Interestingly, in problem-solving strategy 6 ("Visualizing information to help remember"), there is a sharp drop in terms of the frequency. Students rarely used the visualization strategy, no matter which proficiency level they belong to.

For problem-solving strategies, the analysis results showed that there were significant differences in problem-solving strategy 4 ("Paying close attention to reading when text becomes difficult") ( $F=5.00$ ,  $p=.01$ ), strategy 5 ("Pausing and thinking about reading") ( $F=4.67$ ,  $p=.01$ ) and strategy 7 ("Re-reading for better understanding") ( $F=5.53$ ,  $p=.01$ ). The post-hoc Tukey tests showed that significant differences in strategy 4, 5, and 7 were found between high and low level readers. Strategy 8 ("Guessing meaning of unknown words or phrases") also presented significant differences ( $F=7.65$ ,  $p=.00$ ) and the Tukey tests revealed that there were significant differences between the high and low proficiency groups and between the high and intermediate proficiency groups.

Table 8 shows the top five and bottom five strategies used by each reading proficiency group.

Table 8. Top Five and Bottom Five Strategies by Proficiency Levels

Rank	High Proficiency	Intermediate Proficiency	Low Proficiency
Top 1	<b>Support 3:</b> Underlining information in the text	<b>Support 4:</b> Using reference materials	<b>Support 8:</b> Translating from English into Korean
Top 2	<b>Problem-solving 4:</b> Paying close attention to reading	<b>Problem-solving 7:</b> Re-reading for better	<b>Support 4:</b> Using reference materials
Top 3	<b>Problem-solving 7:</b> Re-reading for better	<b>Problem-solving 4:</b> Paying close attention to reading	<b>Global 3:</b> Previewing text before reading
Top 4	<b>Problem-solving 2:</b> Trying to stay focused	<b>Global 7:</b> Using text features	<b>Problem-solving 2:</b> Trying to stay focused
Top 5	<b>Global 8:</b> Using context clues	<b>Problem-solving 1:</b> Reading slowly and carefully	<b>Problem-solving 7:</b> Re-reading for better
Bottom 5	<b>Global 4:</b> Checking how text content fits purpose	<b>Support 1:</b> Taking notes while reading	<b>Global 13:</b> Confirming predictions
Bottom 4	<b>Support 1:</b> Taking notes while reading	<b>Global 4:</b> Checking how text content fits purpose	<b>Global 6:</b> Determining what to read closely
Bottom 3	<b>Support 7:</b> Asking oneself questions	<b>Problem-solving 6:</b> Visualizing information read	<b>Problem-solving 6:</b> Visualizing information read
Bottom 2	<b>Global 10:</b> Analyzing and evaluating the text	<b>Global 10:</b> Analyzing and evaluating the text	<b>Support 7:</b> Asking oneself questions
Bottom 1	<b>Problem-solving 6:</b> Visualizing information read	<b>Support 7:</b> Asking oneself questions	<b>Global 10:</b> Analyzing and evaluating the text

All three proficiency groups reported one support strategy as the most frequently used strategy. Low proficiency students, however, tend to use supportive information from outside of the context such as translating the text into Korean (Support 8) and using reference materials such as dictionaries (Support 4), while high level students tend to use context clues in the text.

Considering rarely used strategies, the same strategies (global 4, support 1,



support 7, global 10 and problem-solving 6) were commonly reported as the bottom five strategies by the high and intermediate proficiency groups. Among the five strategies, three (support 7, global 10 and problem-solving 6) were identified as strategies which all the three proficiency groups rarely used. It shows that no matter what their proficiency levels, it is unlikely that students ask themselves questions, analyze or evaluate the text, and visualize information.

## 5. Discussion and Pedagogical Implications

### 5.1. Overall Pattern of Students' Reading Strategy Use

The results showed that students demonstrated a moderate awareness level of reading strategies, with a clear preference to using problem-solving strategies, followed by support strategies and global strategies.

The findings revealed that among 30 reading strategies, 12 strategies (2 global, 4 support, and 6 problem-solving strategies) were used with high frequency. Two strategies ("Analyzing and evaluating the text" and "Asking oneself questions") were used with low frequency. The remaining 16 strategies (10 global, 4 support and 2 problem-solving strategies) fell in the moderate usage category.

Considering three subscales of strategies, the findings of the present study revealed that the strategies that students least used while reading English texts were global strategies. Only two of the 13 global strategies fell in the high usage category. The reason that the global strategies were least frequently employed while reading English texts may stem from the fact that English reading instructions in Korea mainly consist of interpretation which emphasizes decoding accuracy rather than comprehension of content.

The support reading strategies were the next most frequently used strategies in English reading. In this category, two strategies ("Using information materials," and "Underlining information in the text") were included in the high usage category. This tendency shows students' preferences to look up unknown words in the dictionary. EFL students in Korea, especially low proficiency students, generally tend to use dictionaries as a primary support material to build their vocabulary in English. They also seem to have been trained to

underline important information in texts in English reading classes. On the other hand, “Asking oneself questions” was the least frequently used strategy among the 30 reading strategies.

Students reported they use problem-solving strategies more frequently than the other categories (i.e., global and support strategies). Among the eight problem-solving strategies, six strategies were identified as strategies with high use. Two strategies (“Pausing and thinking about reading” and “Visualizing information to help remember”) were used moderately.

The tendency of the frequent use of problem-solving strategies was also seen in previous studies (Sheorey & Mokhatari, 2001; Mokhatari & Reichard, 2004; Wu, 2005; Zhang & Wu, 2009). These studies reported that ESL students use problem-solving strategies as the most frequently used strategies while reading English texts.

EFL students’ high preference for the problem-solving strategies while reading in English might be because students had acquired problem-solving strategies when learning the target language. It is likely that in the English classroom at secondary schools, students are asked to focus on textual information itself while answering questions given in the English test preparation books and materials for the university entrance examination.

Considering global reading strategies, the findings showed that students’ strategy use was rather limited to the text features, not planning for the reading act, nor predictions. Moreover, two items (“Analyzing and evaluating the text” and “Confirming prediction”) were among the five least used reading strategies. These results may show that participants are not active readers. They might not be trained to be critical thinkers. Students might just extract important information, key words, and main ideas in reading passages while reading for test preparation. They are apt to pay attention to literal meaning per se.

## 5.2. English Reading Proficiency and Reading Strategy Use

Reading is a strategic act and thus successful readers use cognitive and metacognitive strategies to understand text. The findings of the present study showed that there are significant differences in overall metacognitive reading strategy use between the high and low proficiency readers. More specifically, there were significant differences in the global strategies between the high and

low proficiency groups. Significant differences were also found in the problem-solving strategies between the high and low proficiency groups and between the high and intermediate proficiency group. No significant difference, however, was found in the support strategies. These findings indicate that students with high English reading proficiency tend to use significantly more global and problem-solving strategies than students with low reading proficiency.

These strategy use patterns were consistent with previous research on L2 reading strategy. Studies have revealed that successful L2 readers know how to use appropriate strategies to comprehend texts, while poor readers generally lack effective reading strategies (Alderson, 2000), have little awareness on how to approach reading (Baker & Brown, 1984), and are deficient in the use of strategies to monitor their comprehension of texts (Pitts, 1983). In addition, research has revealed that successful comprehension depends on processing (Pressley & Afflerbach, 1995; Baker & Brown, 1984). Trofimovich & Gattbonton (2006) also mention that "low-accuracy learners' limited short-term working-memory capacity may constrain the amount of perceptual detail they comprehend, promoting their reliance on semantic and conceptual processing of L2 input." (p. 528).

### 5.3. Pedagogical Implications

The present study has some pedagogical implications for EFL teachers and learners. First, the results of this study suggest that students need to be encouraged to use more global and supporting reading strategies. Students, in general, are unlikely to analyze and evaluate the information in the text and to ask themselves questions about the meaning of what they are reading. It indicates that students need to be trained to analyze and evaluate the text.

The results showed that there were significant differences in overall reading strategy use between the high and low proficiency students, suggesting that low proficiency readers should be encouraged and motivated to use strategies more frequently and effectively in English reading. Learners, especially low proficiency readers should be consciously aware of different types of reading strategies in that they tend to use a fixed set of reading strategies that they are familiar with regardless of text types. Low proficiency students would benefit from an informed strategy training to help them to reflect their reading

processes, identify their weaknesses. They would first get strategy practice in using problem-solving strategies and then later in using global strategies. During reading, they may have difficulty decoding and so have difficulty reading the words of their texts accurately.

Since low proficiency readers often lack sufficient background knowledge about the topic of a text or they frequently are not able to activate it to help them understand what they have read, low proficiency readers need to practice problem-solving strategies, which readers employ while working directly with the text, especially when the text becomes difficult. These strategies include guessing the meaning from unknown words, adjusting one's reading rate, visualizing the information read, resolving conflicting information, and rereading the text to improve comprehension.

Having strategic knowledge will help L2 learners think about their learning and reading process in order to enhance their reading efficacy. Teachers need to know if students know enough about their own reading strategies to approach texts flexibly and adaptively. Students also need to know the whats, whys, hows, and whens of strategic reading. In addition, students should know enough to be able to recognize the importance of using multiple strategies, analyzing the reading task before them, reflecting on what they know or don't know about the topic to be read about, and devising plans for successful completion of the reading task and for evaluating and checking their progress in accomplishing the task (Vacca et al., 2004, p. 77).

Teachers must care about the processes involved in reading and must be willing to devote instructional time to the processes through direct strategy-instruction and modeling. Teachers can observe students as they read in order to find out students' strengths and weaknesses in terms of strategy use, which in turn will help provide effective and appropriate strategy instruction. Teachers also must think about how and in what context a particular strategy is best applied. Teachers must present strategies in different texts and tasks so that strategies can be applied to a variety of reading situations and contexts. Teachers must provide students with opportunities to practice strategies they have been taught.

Ogle (1986, 1989) also suggested KWL (What I Know, What I Want to Learn, and reviewing What I Have Learned) procedures that teachers can use to

help students learn to activate their background knowledge and to set purposes for reading. Brown & Coy-Ogan (1993) suggested Transactional Strategy Instruction (TSI) and mentioned that students need to be taught to use a set of reading strategies, including predicting based on prior-knowledge activation, generating and asking questions, clarifying, visualizing, relating background knowledge to text content, and summarizing. They also stated that in small-group settings, students should be encouraged to relate a text to their background knowledge, to summarize text, to describe any mental images they make during reading, and to predict what might happen next in the text. As students read aloud, they can engage in and exchange individual interpretations of and responses to the reading.

Likewise, teachers need to provide effective comprehension instruction that helps students to become independent, strategic, and metacognitive readers who are able to develop, control, and use a variety of comprehension strategies to ensure that they understand what they read. It is clear, however, that one size does not fit all when it comes to instruction. Students are individuals. Each student and each class is unique. Each student brings a different level of English proficiency, English learning motivation, and so forth to the classroom. English educators must be aware of students' individual differences and adjust their instruction accordingly.

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