

# The Effects of Different Types of Reading Instruction on L2 Reading Comprehension and Metacognitive Awareness

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**Ma, Jee Hyun & Cho, Young Ah. (2017). The effects of different types of reading instruction on L2 reading comprehension and metacognitive awareness. *The Linguistic Association of Korea Journal*, 25(4). 103-123.** This study investigated the effects of different types of reading instruction on L2 reading comprehension and metacognitive awareness of strategies. Sixty-eight students with low-intermediate English proficiency levels were assigned to summarization task, textual enhancement task, and control groups. The present study employed three major instruments: a background questionnaire, a pre- and post-Metacognitive Awareness of Reading Strategies Inventory (MARS), and pre- and post-reading comprehension tests. The findings of the study indicate that textual enhancement instruction leads to improvement in terms of metacognitive strategy use and reading comprehension performance. In addition, both the summarization and textual enhancement groups show better reading gains compared to their initial reading knowledge. Pedagogical implications and suggestions for L2 reading research have been added based on the findings.

**Key Words:** reading instruction, metacognitive strategies, summarization, textual enhancement

## 1. Introduction

In the field of second language (L2) acquisition, considerable attention has

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been paid to identifying the characteristics of successful language learners and classifying effective learning strategies since the late 1970s (Karbalaee, 2010; Li, 2010; Oxford, 1990; Zhang & Wu, 2009). As with other types of language studies, strategy training has been emphasized in L2 reading contexts (Anderson, 1991; Brantmeier, Callender, Yu, & McDaniel, 2012). Grabe (2004) accumulated results from ten years of reading research and suggested that promoting reading strategies has a lot of instructional implications. Furthermore, as reading generally seems to involve a lot of cognitive capacity, allowing the reader to reach an understanding of written input, reading strategies are regarded as being conducive to learners' successful reading comprehension abilities, as well as their language competence (Bernhardt, 2005; Shim, Lee, & Jin, 2016; Zhang & Wu, 2009).

In recent years, studies on learning strategies have shifted focus from merely classifying types of learning strategies to applying them into language classrooms (Zhang & Zhang, 2011). Grounded in this understanding, a great deal of reading research has been carried out to scrutinize the relationship between reading strategies and reading comprehension under explicit teaching instruction. In doing so, researchers have employed teaching methodologies for reading activities, such as summary development, input and output practice, cognitive and metacognitive strategy training, insertion of adjunct questions, and input enhancement tasks.

Among the variety of instructional treatments, summarization and textual enhancement tasks were seen to have a substantial impact on L2 reading comprehension performance (Mokeddem & Houcine, 2016; Shokrpour, Sadeghi, & Seddigh, 2013). More specifically, summaries can serve as authentic methods of assessing learners' understanding of texts and positively correlate to reading comprehension gains. In a similar vein, textual enhancement tasks have been extensively proposed as being a useful tool for drawing learners' attention and allowing them to notice aspects of their language learning (Kwon, 2015; LaBrozzi, 2016). Along with this, studies also confirmed that learners would become better readers when taught metacognitive reading strategy (Brantmeier et al., 2012; Macaro & Erler, 2008; Shokrpour et al., 2013). Similarly, researchers suggested that metacognitive reading strategies play a vital role in facilitating reading comprehension gains in the complex nature of the reading process

(Grabe & Stoller, 2002; Salataki & Akyel, 2002).

Nevertheless, research has rarely been done to investigate whether or not different types of reading instruction—that is, summarization and textual enhancement—would increase reading comprehension and metacognitive awareness and also perceived reading strategy use in EFL settings. Possibly, this research is an attempt to shed light on the relationship between reading instruction and metacognitive reading strategies. Therefore, the specific research questions for the present study were:

1. How do different types of reading tasks affect L2 learners' metacognitive reading strategy use?
2. How do different types of reading tasks affect L2 learners' reading comprehension ability?

## 2. Literature Review

### 2.1. Learning Strategies in L2 English Reading

In the context of reading, Carrell (1989) proposed that reading strategies are the way in which readers manage to interact with the texts. Carrell also distinguished the characteristics of reading strategies followed by conscious skills, aiming to facilitate reading comprehension and overcoming comprehension difficulties. Cohen (1990) mentioned that reading strategies are mental processes which learners consciously deploy in completing reading tasks. In the reading process, learners employing reading strategies can take a series of actions, such as conceiving a task, constructing meaning from written materials, and choosing alternatives in case of a comprehension break down (Macaro, 2001; Macaro & Erler, 2008). In sum, reading strategies are deliberate techniques or study skills which readers use to foster their reading competence.

Pressley and Afflerbach (1995) identified several techniques for building reading strategies, including overviewing before reading, paying greater attention to main ideas, activating prior knowledge, and monitoring understanding. Zhang and Wu (2009) also profiled a wide array of reading strategies, from skimming,

inferring, scanning, and more recently, activating schemata, using mental imagery, visualizing, and evaluating strategy-use frequency. In addition, Missori (2007) pointed out that critical reading strategies could make learners read critically and confidently and classified them into seven sub-scales: annotating, previewing, contextualizing, questioning, reflecting, summarizing and evaluating, and developing arguments.

Recent studies on perceived reading strategy use between proficient and less proficient readers indicated successful readers generally showed a higher level of metacognitive knowledge that contributed to enforcing their reading abilities (Aghaie & Zhang, 2012; Sheorey & Mokhtari, 2001). Regarding factors of metacognitive reading strategies, Brown (1987) included declarative knowledge, procedural knowledge, and conditional knowledge among them. Declarative knowledge refers to the information an individual knows, as well as influential elements of the learner's performance, while procedural knowledge refers to the execution of procedural skills. Conditional knowledge is defined as knowledge about knowing how to apply various cognitive actions to learning. Mokhtari and Reichard (2002) devised the Metacognitive Awareness of Reading Strategies Inventory (MARS), which covers the three subcategories: global reading strategies, problem-solving strategies, and support reading strategies. Global reading strategies orient readers towards a global analysis of texts, and problem-solving strategies represent action plans that help readers better understand texts. Support reading strategies refer to functional or support mechanisms that involved using reference materials in comprehension the text.

## 2.2. Studies on Reading Instruction in L2 English Reading

Empirical studies have been done to ascertain the effects of diverse reading instructions on L2 reading comprehension. Studies on summarizing tasks in reading revealed that a summarization can cultivate learners' active reading behaviour and consequently enhance their reading comprehension ability (Cordero-Ponce, 2000; Graham & Herbert, 2010). Fotovatian and Shokrpour (2007) stated that learners, relying on strategies such as summarizing and note-taking, had better reading skills than those who do not. Shokrpour et al. (2013) examined the effects of summary writing on L2 learners' reading

performance. The results stated that writing-summary instruction led to an increase in learners' reading knowledge gains, whereas the control group, who received only reading tasks that had been delivered in a traditional way, did not show any improvement in reading.

Studies on text enhancement in L2 reading had also been conducted by several researchers. Han, Park, and Combs (2008) reviewed studies on textual enhancement and input in an L2 learning environment, and concluded that textual enhancement might affect local and global comprehension depending on the experimental instruments. Kwon (2015) examined the impact of textual enhancement activities on EFL high school students who had varying English proficiency levels. The outcomes verified that learners trained to underline and highlight key information improved on their post-reading test gains. More specifically, the mean differences on the pre- and post-tests were observed with intermediate and lower-proficiency learners but not the advanced learners. LaBrozzi (2016) investigated whether or not different types of textual enhancement affected L2 form recognition and reading comprehension. The textual enhancement cues were underlining, italicizing, boldening, uppercasing all letters, increasing font size, and the changing of fonts. The findings revealed that the group given an increased font size outperformed the other groups in terms of L2 form recognition, yet the findings did not show any significant difference in terms of reading comprehension test scores. The researcher explained that the learners did not seem to be distracted by the types of textual enhancement cues and focused on the meaning of the texts with differently enhanced language forms.

Taken together, even though a number of researchers have explored efficient ways to raise L2 learners' reading strategy use and reading comprehension ability, relatively few studies have reported results comparing summary writing and textual enhancement tasks in the L2 reading process.

### 3. Methods

#### 3.1. Participants

A total of 68 college students were recruited from a required English course at a university in South Korea (age=19-24). The participants were all freshmen, and they came from the three departments: business administration, beauty science, and IT automotives. The participants were assigned to the summarization task group (hereafter, STG), the textual enhancement task group (hereafter, TTG), and the control group (hereafter, COG) (see Table 1). Before taking the English course, the participants had taken an English placement test developed by the university and the mean scores ranged from a high of 13 to a low of 4, scored out of a total of 20 points. Additionally, most learners ( $N=46$ , 67.7%) reported their general English proficiency levels as being below 4 with a maximum score of 7 on a self-rated English proficiency assessment. Accordingly, the participants in the study were assumed to be at the low-intermediate range of proficiency.

Table 1. Distribution of the Participants

Group	<i>N</i>	Male	Female
STG	23	12 (52.2%)	11 (47.8%)
TTG	21	1 (4.8%)	20 (95.2%)
COG	24	22 (91.7%)	2 (8.3%)
Total	68 (100%)	35 (51.5%)	33 (48.5%)

#### 3.2. Instruments

Three instruments were employed in the study: a background questionnaire, pre- and post-Metacognitive Awareness of Reading Strategies Inventory (MARS) questionnaires, and pre- and post-reading comprehension tests.

The background questionnaire was administered to elicit information about the participants' gender, age, self-reported English proficiency level, and their perceptions about difficult areas of English reading comprehension question types.

The pre- and post-reading strategy questionnaires were adapted from the Metacognitive Awareness of Reading Strategies Inventory (MARSİ) (Mokhtari & Reichard, 2002). Mokhtari and Reichard constructed the MARSİ to measure adult learners' metacognitive awareness, as well as perceived of reading strategy usage while for those engaged in reading academic materials. The MARSİ included three factors: global reading strategies (13 items), problem-solving strategies (8 items), and supporting reading strategies (9 items). Specifically, global reading strategies refer to a set of reading strategies for setting the reading purpose and analyzing the text globally, while problem-solving strategies focus on solving problems that might occur while trying to understand a textual context. Supporting reading strategies use support tools, such as reference materials, notetaking, and other support mechanisms. In the current study, 30 question-items, slightly modified from the MARSİ, were administered as the instrument and were measured using a five-point Likert scale, rated from strongly disagree (1) to strongly agree (5).

The pre- and post-reading comprehension tests were made up of 12 passages and 12 multiple-choice question items. Each text was followed by one comprehension question item respectively, and correct answers were given one point. The pre-reading comprehension test was intended to ensure learners' homogeneity in terms of English reading knowledge at the onset of the study, as well as showing their present levels of reading competence. Meanwhile, the assigned post-test was meant to examine learners' overall understanding of reading passages depending on different task conditions. The criteria used to select the targeted reading test features were based on the learners' responses in the background questionnaire, where they were asked about the three most difficult test types on English reading tests: find the subject, fill in the blank, match the content, order the sentences, or insert a given sentence. The results showed that the most difficult reading test types belonged to fill in the blank (47.5%), followed by insert a given sentence (39.6%), and then order the sentences (24.8%). Accordingly, these three parts were chosen as the targeted test types, each containing 4 question items respectively. Both pre- and post-tests had identical passages and question items.

With regard to the materials for the reading tests and the treatment passages, all expository texts were drawn from *It's English healing reading* (Ha, 2016). To

make sure that the reading passages were an appropriate level of difficulty, Flesch 2.0 for Windows was used to check the Flesch-Kincaid grade level, the Flesch reading easy level, and average words. The twelve test passages and 6 treatment passages used varied from a 9.09 to 10.64 reading level while the easy reading level varied from 40.52 to 65.47. In addition, each passage had approximately 93 to 134 words and contained one question item.

### 3.3. Procedure

In the first session, the participants were told to fill out the background questionnaire. Then, in order to clarify if any significant difference among groups existed in terms of metacognitive awareness, perceived reading strategy use, and reading comprehension ability, the pre-MARSI questionnaire and pre-reading test were administered at the beginning of the experiment.

Afterwards, the three groups undertook three weeks of experimental instruction once a week consisting of different reading tasks. First of all, explicit instruction for the experiment groups was presented to the learners using Irwin's model (2006): explanation, modelling, transferring, and application. The three groups received treatment materials to be read but the experiment groups were exposed to different types of tasks, summarization and text enhancement.

As for reading task intervention, learners in the summarization task group were taught to write summaries of the reading passages they had read. They were also instructed about the qualities of a good summarizer: write an exact thesis statement, include an important main point, and restate the main ideas in their words (Chiu, 2015). Meanwhile, the textual enhancement task group was required to make visual information more salient by using textual enhancement cues. To be more specific, they were directed to emphasize important points in a source by underlining, boldening, or highlighting texts, which proved effective types of textual enhancement (LaBrozzi, 2016; Loewen & Inceoglu, 2016). On the other hands, the control group was not engaged in any reading instructional task. After being engaged in the different task conditions, the three groups selected answer which best fit the comprehension question items that followed each treatment passage. After the three week training instruction periods, learners took part in the post-reading test, as well as the post-MARSI questionnaire.



### 3.4. Data Analysis

The background questionnaire was measured by an analysis of frequency. To ensure the internal consistency, Cronbach's alpha coefficients were calculated for the MARSIs scales. The pre- and post-MARSIs question items were analyzed by applying descriptive statistics, a MANOVA, and Post-hoc pairwise comparisons. In regard with the pre- and post-reading comprehension tests, descriptive statistics, an ANOVA, a paired samples *t*-test, and Post-hoc pairwise comparisons were carried out, as well. Statistical data analysis was checked by Statistical Package for Social Studies (SPSS) 20.0 for Windows.

## 4. Results and Discussion

### 4.1. Different Types of Reading Instruction and Metacognitive Reading Strategies

The first research question investigated the effects of different types of reading instruction on metacognitive awareness and perceived reading strategy use. The internal consistency of the Metacognitive Awareness of Reading Strategies Inventory (MARSIs) was measured by Cronbach's alpha. The reliability coefficient for the three categories in the MARSIs were .879 for global reading strategies, .825 for problem-solving strategies, and .881 for support reading strategies. The overall reliability of MARSIs was .944 with a total of 30 items, revealing a reasonably dependable measure of metacognitive reading strategies.

Next, Table 2 depicts the pre-MARSIs results with descriptive statistics. As can be seen, the mean scores for global reading strategies were 3.009, problem-solving strategies were 3.206, and support reading strategies were 2.912. This study was in line with Karbalaei's (2010) findings that EFL college students reported the problem-solving strategy factor as the most frequently used one. The participants' overall levels of metacognitive reading strategies seemed not to be high, and they might belong to a medium level according to Oxford's (1990) and Schmitt's (2000) scoring system (a medium level:  $M=2.5-3.5$ ).

Table 2. The Results of the Descriptive Statistics of the Pre-MARSI

Categories	Group	M	SD	Rank
Global reading strategies	STG	2.963	.648	3
	TTG	3.018	.581	2
	COG	3.045	.433	1
	Total	3.009	.552	2
Problem-solving strategies	STG	3.109	.679	3
	TTG	3.363	.569	1
	COG	3.162	.492	2
	Total	3.206	.585	1
Support reading strategies	STG	2.836	.715	3
	TTG	2.847	.599	2
	COG	3.042	.630	1
	Total	2.912	.649	3

In order to examine whether or not there existed any difference among the three groups in terms of metacognitive awareness towards English reading strategies, a MANOVA was run for the pre-MARSI. The outcomes revealed that the slight difference observed in the mean scores was not significantly different ( $F=1.563$ ,  $Sig.=.163$ ), showing that the three groups were homeogenous across the MARSI categories. Hence, it could be assumed that learners had similar levels of reading strategies from the start.

In relation to the effect of different reading instruction on metacognitive awareness and reading strategy use, the outcomes of the post-MARSI were checked using descriptive statistics (see Table 3).

Table 3. The Results of the Descriptive Statistics of the Post-MARSI

Categories	Group	M	SD	Rank
Global reading strategies	STG	3.090	.425	3
	TTG	3.498	.292	1
	COG	3.151	.435	2
	Total	3.238	.425	2
Problem-solving strategies	STG	3.212	.557	2

	TTG	3.458	.548	1
	COG	3.135	.420	3
	Total	3.261	.520	1
	STG	2.705	.401	3
Support reading strategies	TTG	2.884	.457	2
	COG	2.921	.597	1
	Total	2.837	.497	3

The results indicated that the mean scores of the global reading strategies (M=3.238) and problem-solving strategies (M=3.261) were numerically higher than those of the pre-MARSI, except for support reading strategies (M=2.837) (refer to Table 2). The TTG learners, in particular, showed the highest mean scores based on the factors, global reading and problem-solving strategies, relative to the other groups, but not in terms of support reading strategies.

To further explore whether or not the differences were statistically significant among the groups, a MANOVA was employed, and the outcomes are presented in Tables 4 and 5. The results revealed a significant difference in the factor of the global reading strategies (*Sig.*=.002) but with no significant impact for the problem-solving or support reading strategies.

Table 4. The Results of a MANOVA on the Post-MARSI

Effect	Value	F	Hypothesis <i>df</i>	<i>df</i>	<i>Sig.</i>	<i>ES</i>	
Intercept	Wilks' Lambda	.013	1603.218	3	63.000	.000	.987
Group	Wilks' Lambda	.743	3.359	6	126.000	.004	.138

*p*<.05, *ES*= Effect Size

Table 5. The Results of Group Comparison on the Post-MARSI

Categories	Source	<i>SS</i>	<i>df</i>	<i>MS</i>	F	<i>Sig.</i>	<i>ES</i>
Global reading strategies	Between Groups	2.106	2	1.053	6.831	.002	.174
	Within Groups	10.021	65	.154			
	Total	12.127	67				
Problem-solving strategies	Between Groups	1.252	2	.626	2.407	.098	.069
	Within Groups	16.896	65	.260			
	Total	18.148	67				

Support reading strategies	Between Groups	.615	2	.307	1.254	.292	.037
	Within Groups	15.940	65	.245			
	Total	16.555	67				

$p < .05$ ,  $ES$  = Effect Size

To exactly investigate where significant differences lay, Post-hoc pairwise comparisons were administered, and Table 6 demonstrates the results. The textual enhancement task had higher effects on the global reading strategies than any other group, being the difference existed as statistically significant. Yet, there was no difference with the summary task and control groups across the factors of reading strategies. Here, it is worth noting that textual enhancement training effectively helped learners be aware of metacognitive reading strategies, which eventually led to improvement of the frequency of reading strategy use. That is, it can be quite clear that specific task training, the textual enhancement in the current study, might activate learners' awareness and actual use of strategies, proving that the connection between strategy instruction and applications of learning strategies could be maximized for optimal effects in L2 learning.

Table 6. The Results of a Post-hoc Pairwise Comparisons on the Post-MARSI

Categories	(I) Group	(J) Group	MD (I-J)	Std. Error	Sig.
Global reading strategies	STG	TTG	-.4079*	.11851	.003
		COG	-.0603	.11457	1.000
	TTG	COG	.3475*	.11732	.013
Problem-solving strategies	STG	TTG	-.2464	.15388	.343
		COG	.0765	.14877	1.000
	TTG	COG	.3229	.15235	.114
Support reading strategies	STG	TTG	-.1783	.14946	.712
		COG	-.2160	.14450	.419
	TTG	COG	-.0377	.14797	1.000

$p < .05$

More specifically, among the global reading strategies' question items, the TTG learners rated significantly higher frequency use across the five items than all of the other groups, but a significant difference was not found between the STG and COG: "I skim the text first by noting characteristics like length and organization" ( $F=4.087$ ,  $Sig.=.021$ ), "I use tables, figures, and pictures in text to

increase my understanding” ( $F=6.116$ ,  $Sig.=.004$ ), “I use context clues to help me better understand what I’m reading” ( $F=6.970$ ,  $Sig.=.002$ ), “I use typographical aids like boldface and italics to identify key information” ( $F=15.515$ ,  $Sig.=.000$ ), “I critically analyze and evaluate the information presented in the text” ( $F=8.63$ ,  $Sig.=.000$ ). The better outcomes of the TTG suggested that practicing textual enhancement techniques was helpful for relatively low-intermediate learners to raise their awareness and use of reading strategies during the L2 reading process.

In sum, the present study maintained that being assigned to textual enhancement tasks could be an important predictor of metacognitive awareness of reading strategies; thus, the opportunities for repeated practice through visual, textual enhancement tasks should be adequately integrated into English reading contexts.

#### 4.2. Different Types of Reading Instruction and L2 Reading Comprehension Ability

The second research question investigated the effects of reading instruction on reading comprehension performance. To determine if the three groups had the same knowledge towards reading comprehension, the mean scores of the pre-reading comprehension test were measured using descriptive statistics (see Table 7).

Table 7. The Results of Descriptive Statistics on Pre-reading Test ( $K=12$ )

Group	<i>N</i>	<i>M</i>	<i>SD</i>	Min	Max
STG	23	3.30	1.550	1	6
TTG	21	3.62	1.687	1	7
COG	24	3.92	1.586	1	7
Total	68	3.62	1.603	1	7

*K*=the number of items

The mean scores in the STG were 3.30, the TTG were 3.62, and the COG were 3.92 respectively, and they got nearly equal means. Therefore, it could be mentioned that learners appeared to have low English reading knowledge initially.

To identify if there was a significant difference on the pre-reading test, an ANOVA was implemented and the findings are illustrated in Table 8. The results indicated no significant difference among groups ( $Sig.=.431$ ). Consequently, learners were comparable in their reading comprehension knowledge prior to receiving the treatment.

Table 8. The Results of an ANOVA on Pre-reading Test

Test	Source	SS	df	MS	F	Sig.	ES
Pre-test	Between groups	4.404	2	2.202	.854	.431	.025
	Within groups	167.655	65	2.579			
	Total	172.059	67				

$p<.05$ , ES= Effect Size

Next, to investigate the effects of reading instruction on reading comprehension gains, the mean scores of the post-reading test were checked by descriptive statistics. As indicated in Table 9, the TTG's performance ( $M=6.43$ ) was superior to the other groups, followed by the STG ( $M=4.70$ ) and the COG ( $M=4.13$ ) on the post-test.

Table 9. The Results of Descriptive Statistics on Post-reading Test ( $K=12$ )

Group	N	M	SD	Min	Max
STG	23	4.70	1.490	2	8
TTG	21	6.43	1.568	4	10
COG	24	4.13	1.424	2	8
Total	68	5.03	1.762	2	10

$K$ =the number of items

Table 10 exhibits the results of the ANOVA analysis. The results revealed that a significant difference existed among groups ( $Sig.=.000$ ). To precisely understand whether these mean differences were statistically significant, Post-hoc pairwise comparisons were employed, and Table 11 displays the results. The findings showed that the learning gains of the textual enhancement task group significantly exceeded those of the other groups in terms of reading skills, whereas the summarization task group and control group were not significantly different on the test. This study supported Han et al.'s (2008)

findings, with the results revealing that textual enhancement of meaningful forms could lead to improvements on comprehension ability.

Table 10. The Results of an ANOVA on Post-reading Test

Test	Source	SS	df	MS	F	Sig.	ES
Post-test	Between groups	63.304	2	31.652	14.224	.000	.304
	Within groups	144.637	65	2.225			
	Total	207.941	67				

$p < .05$ , ES= Effect Size

Table 11. The Results of a Post-hoc Pairwise Comparisons on Post-reading Test

Test	(I) Group	(J) Group	MD (I-J)	Std. Error	Sig.
Post-test	STG	TTG	-1.733 <sup>*</sup>	.450	.001
		COG	.571	.435	.583
	TTG	COG	2.304 <sup>*</sup>	.446	.000

$p < .05$

Here, these results might be interpreted based on the assumptions in the empirical studies. First, the learners in the TTG were intended to underline and bolden the main ideas on the passages, which in turn might give them a chance to double-check texts and encourage in-depth reading for content relevance. As researchers have pointed out, enhancing input along with enhancing the saliency of the target language could trigger learners' attention and noticing when they encounter language forms (Sharwood Smith, 1993; Simard, 2009). Another plausible interpretation is that writing a summary is the more demanding cognitive task and requires enough training to be mastered by less-proficient learners (Delaney, 2008). Thus, the STG learners were likely to be less attentive to information located in the details, and it possibly made them focus primarily on writing, not on understanding the texts' contents.

Supplementally, to compare the results of the pre- and post-reading tests, a paired samples *t*-test was employed, and the outcomes are presented in Table 12.

Table 12. The Results of Group Comparison between Pre- and Post-reading Tests

Group	Pre-test			Post-test		<i>t</i>	<i>Sig.</i>	<i>ES</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
STG	23	3.30	1.550	4.70	1.490	-2.938	.008	.160
TTG	21	3.62	1.687	6.43	1.568	-5.560	.000	.439
COG	24	3.92	1.586	4.13	1.424	-.522	.607	.005

$p < .05$ , *ES* = Effect Size

The results demonstrated that both experimental groups, the summary and textual enhancement task groups, had similar facilitating effects on immediate reading performance compared to initial reading knowledge. Even though the mean scores on the post-test were significantly different between the two groups (refer to Table 11), both reading tasks had a positive effect on post-reading performance compared to initial reading knowledge. In this respect, these findings were consistent with the previous research. Sarkhosh, Taghipore, and Sarkhosh (2013) pointed out that learners should be directed to apply a textual enhancement approach in their reading contexts, which ultimately leads to them being effective when allied with their learning strategies. As for the writing instruction, Chiu (2015) and Shen (2009) posited that summarization practice provided greater opportunities of eliciting main ideas in the excerpts and played a role of enriching learners' reading comprehension and writing skills. However, considering the effect size, the textual enhancement group was accompanied by a greater effect size ( $ES=.439$ ) than that of the summarization group ( $ES=.160$ ). Thus, we can cautiously infer that the textual enhancement training could be more effective than the summary task for enhancing L2 reading comprehension ability.

On the whole, this study stated that types of reading instruction might be one of the variables differentiating group performance. The textual enhancement task can have a substantial influence on immediate reading outcomes with larger effect sizes, as well as the writing summary and textual enhancement task, which can also be effective on the post-test relative to initial reading knowledge.



## 5. Conclusion

The current study aimed to identify the effects of reading instruction on L2 college students' reading comprehension and metacognitive reading strategies. First of all, the learners in the textual enhancement group exhibited higher levels of global reading strategy use than the summarization and control groups. With respect to reading comprehension ability, the textual enhancement instruction group showed the greatest performance on the post-test while both summarization and textual enhancement tasks contributed to an improvement on the immediate reading gains compared to their initial reading knowledge. Therefore, this study confirmed previous research studies' conclusions, namely that appropriate teaching methods and explicitly strategy training should be presented to L2 learners, so they can acquire specific language skills in English learning settings (Aghaie & Zhang, 2012; Li, 2010). Presumably, practicing reading strategies and doing summarization and textual enhancement tasks in the study, could have been an influential factor for reading comprehension knowledge. Yet, with the larger effect size, the textual enhancement task can be a more efficient way to enrich metacognitive reading strategies and reading skills for low-intermediate English learners.

As L2 researchers have argued, successful comprehension may not occur naturally, and it needs directed and explicit cognitive effort. In this regard, Karbalaei (2010) stressed that learners can better understand written input through reading strategy training, and further, they would have a more self-regulative attitude towards L2 acquisition. Some researchers also demonstrated that teaching strategic reading could encourage learners' actual use of strategies, which could assist them to be constructively responsive and more autonomous, skillful readers, as well as promote reading achievement (Pressley & Afflerbach, 1995; Sheorey & Mokhtari, 2001). Therefore, to improve L2 readers' reading competence, extensive practice with a variety of strategy instruction should be integrated in L2 classroom.

Our study contains limitations. The participant sample size in the study was small; thus, a larger sample size with learners from more various English proficiency levels would have been more desirable. In addition, considering the effects of time intervention on learners' performance for the long-term

perspectives, learners' comprehension performance should be investigated through pre-, post-, and delayed tests. This study also suggested more diverse instructional tasks and text sources for further research.

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