



The Influence of Text Difficulty and Reading Ability on Korean EFL Readers' Summary Writing

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ABSTRACT

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The purpose of this study was to investigate the effects of text difficulty and reading comprehension ability on English summary writing of Korean EFL readers. Forty-four university freshmen participated in this study, in which they were asked to read two expository English texts and write a summary in English for each source text. Their summaries were analyzed in terms of the content idea units, idea units at different importance levels, accuracy, paraphrase and integration, and intrusion. The results showed that higher-level readers were able to identify the important information and overall content ideas of the source text better than lower-level ones. The more proficient readers were also more skillful at integrating the ideas of the original text and reproducing them in their own words than the less proficient readers. Moreover, regardless of the reading comprehension level, there were less inaccurate statements in the easier text summarization in both groups. The pedagogical implications of these findings are discussed.

I. INTRODUCTION

Summarization, an advanced reading skill, requires students to condense the main ideas and major details of a text succinctly into their own words. Writing a good summary is the key to academic success, especially for university students who are asked to complete a lot of summary writing as homework (Kirkland & Saunders, 1991). Summary writing requires the ability to select the gist in a text and to restate it succinctly and coherently, so even native English university students show inadequate summarization skills, not to mention EFL learners (Taylor, 1984). For learners who lack skills in English reading and writing, it is difficult to identify important ideas and major details from the text, delete the irrelevant information, and paraphrase them into their own words.

Despite the pedagogical implications of English summary writing and its challenge to EFL students, only a limited number of empirical studies have been done in

the field of second language (L2) learning. Only seven research results were found at the Korea Research Memory (www.krm.or.kr) under the keywords of “English summary” and “summarization in English.” For example, D. Lee (2016) analyzed errors in English summary writing of Korean EFL university students in terms of syntax, morphology, and lexicon. M. Jeon and Y. Choe (2019) investigated whether the different text genres—argumentative and expository essays—influence Korean EFL students’ summarizing performance in terms of lexical, semantic, syntactic, and discourse features, and readability under the Coh-Metrix framework.

As in this study, S. A. Kim (2001) considered text difficulty as a variable influencing students’ summary writing but did not consider their English ability. K. M. Kang (2018) investigated only the summary writing of students at a low level while H. J. Oh (2007) compared the summaries of high, intermediate, and low-level learners, but did not include text difficulty as a variable. In the case of J. H.

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Lee and H. K. Lee (2011), text genre was considered in addition to the learners' English ability.

These studies support the argument of Kirkland and Saunders (1991) where students' summary writing is influenced by both external factors such as task loading or text complexity and internal factors such as an individual's language and academic ability, or cognitive and affective domains. They argue that these factors interact with each other and have an impact on summarization performance. Hill (1991) suggests that among several variables influencing summary writing, the most important are text difficulty and the reader's reading comprehension.

Because of the lack of research in the field, it is not clear what Korean EFL students do when they summarize an English text and what factors influence their summarizing performance. The purpose of this study, therefore, was to examine whether the summary skills of Korean EFL university students vary depending on English reading comprehension ability and text difficulty. Indeed, to better understand how to improve summary writing skills, more empirical research is needed in the field.

II. THEORETICAL BACKGROUND

1. Text Difficulty

According to Hidi and Anderson (1986), the cognitive load of the summary task depends on the features of the text to be summarized—the length, genre, and complexity of the text. For example, the longer a text is, the harder it will be to summarize because the process of summarizing includes a lot more works. The more complex a text is, the more difficult it is to identify the main ideas and major details from the original text accurately and concisely. They reported that when a complex text was given, even adult participants produced a summary of partial ideas rather than integrating ideas across the whole text.

S. A. Kim (2001) examined how Korean EFL university freshmen summarize English texts with different levels of complexity. The analysis of their summaries showed that the participants were able to select more main ideas in a difficult text than an easier text although a total of content idea units were more included in the summaries of an easier text. The participants also expressed more personal comments rather than the given information from a source text in a difficult text. In terms of accuracy and transformation, they included more accurate content idea units and more integration of idea units in an easier text. She concluded that text difficulty affects the summarization performance of Korean EFL university students. These studies show similar results on summarization behaviors such as intrusion, accuracy, and transformation. Some mixed results, however, have been found in selecting main ideas. Summarization is a process in which many different factors are intertwined and influenced. Therefore, it is important to look at which factors other than external factors such as text complexity have been identified in previous

research on summarizing.

2. Reading Comprehension Ability

Researchers believe that students with high reading comprehension skill are good at summarization. According to Taylor (1984), more proficient readers have the ability to write a succinct summary by deleting trivial or redundant ideas. Less proficient readers, on the other hand, may not know how ideas are developed and composed of main ideas and supporting details. As a result, the latter fails to extract important ideas from the source text and only remembers a few unconnected ideas.

Chin (2013) investigated English summary writing of Taiwanese EFL university students at different levels of proficiency—high-intermediate and advanced levels of proficiency. The summaries were analyzed in terms of main ideas, extraneous ideas, and inaccurate statements. The results showed that the advanced-level students included more main ideas and less extraneous ideas in their summaries, compared to their counterparts. The high-intermediate level students, on the other hand, copied more from the source text and have difficulty in reproducing and integrating topics.

K. M. Kang (2018) also investigated the English summary writing of Korean EFL university students at a low level. The summaries were analyzed for the idea units at different importance levels. As a result, the participants were able to select the most important idea units from the original text. However, they had trouble finding the next important ideas that should be included in the summary. They also tend to use the same words from the source text in their summaries. He concluded that Korean EFL university students at a low level seem to be ignorant of what a summary is.

H. J. Oh (2007) examined what summarizing rules Korean EFL students at different proficiency levels use in their summaries with the more experienced writers as reference groups. The summarization rules were analyzed in terms of selection, reproduction, transformation, and intrusion. This study found that the participants with experience in summary writing showed better summarizing performance: they paraphrased more often than they exactly replicated the words in the original text, and the rate of intrusion—the intervention of personal opinion—was also decreased. Less experienced summarizers, on the other hand, relied more on copying than paraphrasing the ideas in their own words and included more irrelevant information in their summaries.

J. H. Lee and H. K. Lee (2011) examined how differently Korean EFL university freshmen at different proficient levels summarize the English texts with different genres—a persuasive vs. an expository essay. The proficiency levels of the students were measured with their summary levels. The summarization rules they used were analyzed for invention, selection, and paraphrasing. After grading their summaries, the result showed that the participants summarized the persuasive essay better than the expository essay,

which was prominent in the high-level group. In the case of the invention, there was a significant difference between the high- and low-level groups, especially in summarizing the expository essay; the high-level group was more capable of creating main ideas that are not identified in the original text. Regarding the selection, the lower group less frequently selected topic sentences than the higher group in both text genres. In the case of paraphrasing, there was no significant difference in different proficient groups but in different text genres: the participants paraphrased better when summarizing the persuasive essay.

These studies have shown that the proficient readers are good at selecting main ideas, paraphrasing information from the source text, and avoiding personal opinions than the less proficient readers. Yet not all studies show consistent results. Although several factors that have an impact on students' summarization performance have been identified, it is still unclear why some Korean EFL readers are good summarizers and others not. Moreover, few studies have considered external and internal factors together. Given the lack of research on the factors influencing summarizing performance, this study investigating the effects of text difficulty and reading comprehension ability on Korean EFL readers' summary writing may fill a gap in the field. The study aimed to answer the following questions:

- 1) Does text difficulty influence Korean EFL university freshmen's summary writing in terms of content idea units, accuracy, paraphrase and integration, and intrusion?
- 2) Do Korean EFL university freshmen with different reading comprehension ability differently summarize the source text in terms of content idea units, accuracy, paraphrase and integration, and intrusion?

III. METHODOLOGY

1. Participants

The participants in the present study are forty-four Korean university freshmen enrolled in the required English course in the spring semester of 2020 taught by the researcher. The course usually focuses on developing English reading and writing skills. They were all first-year students from various majors who had not received prior instruction on summary writing. None of them had lived in English speaking countries and they have taken at least 6 years of public English education in Korea. The participants' reading comprehension ability was measured at the very beginning of the semester. The reading comprehension section of the TOEIC was chosen as an assessment tool. The test had a total of 100 multiple-choice items based on three reading parts. All the participants had 75 minutes to complete the general reading ability test. Participants were classified into more proficient readers (a total of 21 students with higher than an average score

of 290 were classified as G1) and less proficient readers (a total of 23 students with lower than an average score of 290 were classified as G2) based on their scores on the test. Randomly selected summaries from each group were scored by a native English teacher to check group homogeneity, and the correlation coefficient showed that there was no significant difference between individual scores of the group members ($r=0.24$; $p=0.870$).

2. Data Collection Procedures

After reading English texts, participants were asked to write two summary writings in English as homework with a length of about 200 words (Appendices I & II). A total of 88 summaries were produced by the forty-four participants as seen in Table 1.

TABLE 1
Essays and Words in the Sample by Korean EFL learners

Group	Total # of Essays	Mean # of Words per Essay	Total # of Words in Sample
G1 ($n=21$)	42	233	9,786
G2 ($n=23$)	46	227	10,442
Total	88	230	20,228

Two expository English texts were employed in the study. Both were taken from the college-level English reading book (Blass & Vargo, 2018). One of them (Text A), entitled "the Human Age" was considered a more difficult text. The other (Text B), entitled "a Cry for the Tiger" was considered an easier text. The difficulty of the texts was decided by the well-known readability criteria. This study adopted 11 readability indices from I. Sung (2014) as seen in Table 2.

TABLE 2
Text Difficulty Between the Texts

Indices	Text A	Text B
Total # of Words	942	839
Total # of Sentences	66	61
Average Words per Sentence	17.013	16.592
Frequency for Content Words	2.051	2.179
Readability: FRE	53.111	53.276
Readability: FKGL	10.055	9.973
Modifiers per Noun Phrase	1	0.96
Words before Main Verb	5	4.184
Argument Overlap	0.187	0.429
LSA Cosine	0.104	0.130
Lexical Diversity: TTR	0.714	0.694

The text with more words, sentences, and longer sentences are considered difficult to understand. The frequen-

cy of content words shows that a particular word is used more often than others: words with high frequency are much easier to read. The readability of the two texts was measured by the Flesh Reading Ease Score (FRE) and the Flesch-Kincaid Grade Level (FKGL): The higher the value on FRE is, the easier the text is, and vice versa in FKGL. Syntactic complexity was measured by modifiers per noun phrase and words before the main verb: the text with more modifiers per noun phrases or more words before the main verb is considered difficult to understand. Cohesion values were measured by argument overlap and LSA cosine for adjacent sentence means (LSA cosine). The text with a higher value on cohesion is easier to understand. Finally, the lexical diversity was measured by the type/token ratios (TTR): The text with high lexical diversity is difficult to read.

3. Analysis and Scoring

In this study, the summaries were analyzed using criteria partially adapted from Chin (2013), K. M. Kang (2018), S. A. Kim (2001), and H. J. Oh (2007). The framework includes content idea units, idea units at four different importance levels, accuracy, paraphrase and integration, and intrusion. The summaries were scored by the researcher of the study and the other rater who is an English teacher and majors in English education.

Content idea units indicate the sentence that has a subject and predicate including restrictive clauses. Sentences with compound predicates are also considered separate idea units. The content idea units are then rated into four levels of importance. Regarding the importance levels, the main ideas were rated into Level 1; the next most important ideas were rated into Level 2, the moderate important ideas were rated into Level 3, and the least important ideas were rated into Level 4. Accuracy was analyzed to determine how much inaccurate or irrelevant information was included in the summary. It was measured by the total number of sentences without inaccurate information divided by the total number of sentences. Paraphrase and integration score shows how well the participants paraphrase and integrate the ideas from the source text into their summaries. Lastly, intrusion indicates how much the

participants include personal comments in their summaries. Previous studies have used different terms indicating summarization rules—selection, deletion, reproduction, or transformation. However, they are the same framework as the ones used in this study. Selection means how many important ideas are selected, and deletion indicates whether trivial and extraneous information is included. Reproduction is a synonym for paraphrase, and transformation for integration.

First, the content idea units from each source text were calculated. To determine the main ideas in the texts, the researcher referred to the teacher’s manual provided by the publisher. Table 3 shows the comparison of content idea units by importance levels between the texts.

TABLE 3
Comparison of Content Idea Units
by Importance Levels Between the Texts

Text	Level 1	Level 2	Level 3	Level 4	Total Content Idea Units
Difficult (A)	11	22	14	7	54
Easy (B)	12	19	5	15	51

When it comes to the importance ratings of content idea units in the source texts, the two raters worked together and reached an agreement. The scores for the content idea units at the importance levels of each participant were then calculated by dividing the content idea units included in the summary by the total number of idea units in the source text. For example, as seen in Table 3, there are 22 idea units at Level 2 in Text A and a student included 5 idea units at Level 2 in his/her summary. Then, it is calculated as $5/22 = 0.23$. Accuracy was also calculated by dividing the error-free content idea units included in the summary by the total number of content idea units in the summary. For example, if a student’s summary contains 15 content idea units and the units without inaccurate information are 11 units out of 15, it is calculated as $11/15 = 0.73$. The higher the value is, the more accurate a text is. The scores for paraphrase and integration were determined by the coding scheme used in Chin (2013) as seen in Table 4.

TABLE 4
Coding Scheme for Paraphrase & Integration (P&I)

P&I Coding Categories	Definition	Points
Verbatim Replication	Copying the whole sentence or more than five consecutive words from a sentence in the source text	0
Unsuccessful Reproduction	A single sentence poorly rewritten	1
Successful Reproduction	A single sentence well rewritten	3
Unsuccessful Combination	Two or more sentences (from one paragraph) poorly integrated	2
Successful Combination	Two or more sentences (from one paragraph) well integrated	4

The individual scores for paraphrase and integration were then calculated by dividing the total points acquired by the total number of idea units in the summary. The following examples show how the percentage is computed.

(1) Original:

The concept was immediately picked up by researchers working in a wide range of disciplines.

Example 1 from G2:

And the concept was immediately picked up by researchers. (0 point)

(2) Original:

Stoppani proposed that people had introduced a new era, which he labeled the Anthropozoic. Stoppani's proposal was ignored; other scientists found it unscientific.

Example 2 from G1:

Anthropocene was ignored in past because it is not scientific. (2 points)

Thus, if a summary was scored 25 points for paraphrase and integration and included 17 content idea units, it was calculated as $25/17=1.47$. The higher points on this variable mean that they are skillful at reformulating the ideas from the original text. The intrusion was calculated by dividing the intruded idea units included in the summary by the total number of content idea units in the summary. The higher the value is, the more personal comments are included in the summary. To check how much agreement (interrater reliability) exists between two raters, the individual scores for a total of eight criteria were selected randomly and compared, which results in an acceptable interrater agreement (Cohen's kappa=0.72). When it comes to a considerable disagreement on the specific ratings, two raters reached an agreement through discussion.

IV. RESULTS AND DISCUSSION

1. Effects of Proficiency Level

The independent variable investigated in this study was the text difficulty (text A vs. B) and reading comprehension ability (G1 vs. G2). This study used eight dependent variables to analyze various aspects of the summaries of text A and B written by Korean EFL university students at different proficiency levels. Table 5 presents the independent-samples *t*-test results for the effects of proficiency level in the difficult text A. The results show that there was a statistically significant difference in the means of idea units at Level 1 between the two groups at the .01 level ($t=4.249, p \leq .01$). The summary written by the more proficient readers included 45% idea units at Level 1 of the original text, in comparison to 25% of the summary written by the less proficient readers. The result is aligned with the finding of Chin's (2013) study that the more advanced level students included more main ideas in their summaries, compared to their less advanced level counterparts. The mean scores of paraphrase and integration were also significantly different between the two groups ($t=2.893, p \leq .01$). The higher value on the variable (1.31 vs. .85) indicates that the more proficient readers tended to paraphrase and integrate the ideas of the original text better than the other group. This result is consistent with the findings of the previous studies (Chin, 2013; K. M. Kang, 2018) that less proficient groups have more problems in reproducing and integrating ideas and are dependent more on the source text. However, this result is not in line with J. H. Lee and H. K. Lee's (2011) study which showed no significant difference between the high- and low-ability groups in their paraphrasing skills.

The summaries of the more proficient group also contained more content idea units at all levels of importance than the ones of the less proficient group although the difference was not statistically significant: the former consisted of 23% idea units at Level 2, 16% at Level 3, and

TABLE 5
T-Test Summary: Effects of Proficiency Level in the Difficult Text A

Criteria	G1		G2		t	p
	Mean	SD	Mean	SD		
Content IU	.23	.107	.19	.027	1.168	.259
Level 1	.45	.124	.25	.075	4.249	.001**
Level 2	.23	.144	.22	.094	.162	.873
Level 3	.16	.097	.15	.118	.105	.917
Level 4	.07	.101	.03	.061	1.021	.322
Accuracy	.80	.194	.74	.106	.899	.381
Paraphrase & Integration	1.31	.417	.85	.249	2.893	.010**
Intrusion	.06	.135	.05	.097	.176	.862

Note. G1=more proficient reader; G2=less proficient reader

** $p \leq .01$

7% at Level 4 while the latter consisted of 22% idea units at Level 2, 15% at Level 3, and 3% at Level 4. As with the mean accuracy score, the more proficient readers also included more accurate information in their summaries than did their counterparts. Yet the difference was not statistically significant.

With regard to idea units at Level 4, however, the proficient readers in this study did not seem to possess summarization skills to delete unimportant details in their summaries. The researcher expected that the reading difficulty may force the less proficient readers to rely more on trivial ideas while avoiding main ideas. According to Friend (2000) and Chin (2013), proficient readers are believed to write a succinct summary by deleting trivial and redundant ideas, compared to the less proficient readers. Concerning the results, S. A. Kim (2001) explains that there is an overall tendency for Korean students to have difficulty distinguishing between what was important and what was not in a difficult text.

The higher mean score of intrusion for a summary written by the more proficient readers also indicates that they may be unaware that a summary should not include personal opinions. Concerning this, H. J. Oh (2007) comments that the summary skills to avoid using personal opinions is not about language skills but about how much students are exposed to summary writing training.

Like in Table 5, there was a significant difference in the means of idea units at Level 1 between the two groups at the .01 level ($t=2.959, p \leq .01$), albeit not that big a difference in the difficult text. The summary written by the more proficient readers included 44% idea units at Level 1 of the original text, in comparison to 30% of the summary written by the less proficient readers. Based on the results of Table 5 and 6, the fact that the more proficient readers include more main ideas in their summaries than the less proficient readers is consistent with the observation of Chin's (2013) study.

Compared to Table 5, the summaries of the less proficient group show a higher mean score of content idea units at Levels 2 and 4 than the ones of the more proficient

group. Yet the difference was not statistically significant: the former consisted of 21% idea units at Level 2 and 9% at Level 4 while the latter consisted of 18% idea units at Level 2 and 6% at Level 4. As seen in Table 6, the mean scores of paraphrase and integration, and accuracy were still higher in the summaries of more proficient readers, albeit no statistically significant difference. Finally, concerning intrusion, the summaries written by more proficient readers contained more personal comments, the same results as seen in Table 5. According to H. J. Oh (2007) study, the group with a higher level of English thought the summary should contain personal opinions while groups with experience in writing a summary had a clear idea that individual opinions should not be included in the summary. Further study as to the effects of teaching summary skills is open to consideration.

2. Effects of Text Difficulty

Table 7 presents the independent-samples *t*-test results for the effects of text difficulty on more proficient readers.

The mean score of accuracy rates was significantly different between text A and B ($t=-1.737, p < .10$), which means the proficient readers included more accurate content idea units from the source in the easier text.

As seen in Table 7, the proportion of the total content idea units and idea units judged to be important levels (at Levels 1 and 2) may be related to text difficulty although the difference was not statistically significant. That is, for the proficient readers, summarizing the difficult text involved more main ideas: 23% content idea units, 45% idea units at Level 1, and 23% at Level 2. Summarizing the easier text, on the other hand, involved 21% content idea units, 44% idea units at Level 1, and 18% at Level 2. The result reminds of S. A. Kim's (2001) study that compared to the easier text, the more difficult text consisted of more content idea units and idea units at Level 1.

The difference between text A and B was also in the mean score of intrusion, albeit no statistically significant.

TABLE 6
T-Test Summary: Effects of Proficiency Level in the Easier Text B

Criteria	G1		G2		<i>t</i>	<i>p</i>
	Mean	SD	Mean	SD		
Content IU	.21	.059	.20	.048	.598	.558
Level 1	.44	.119	.30	.073	2.959	.009**
Level 2	.18	.117	.21	.111	-.496	.626
Level 3	.24	.206	.20	.200	.428	.674
Level 4	.06	.072	.09	.095	-.950	.356
Accuracy	.92	.091	.85	.107	1.525	.146
Paraphrase & Integration	1.33	.706	.98	.300	1.366	.190
Intrusion	.11	.150	.05	.079	1.136	.272

Note. G1=more proficient reader; G2=less proficient reader
** $p < .01$

TABLE 7
T-Test Summary: Effects of Text Difficulty on More Proficient Readers

Criteria	Text A		Text B		<i>t</i>	<i>p</i>
	Mean	<i>SD</i>	Mean	<i>SD</i>		
Content IU	.23	.107	.21	.059	.464	.648
Level 1	.45	.124	.44	.119	.202	.842
Level 2	.23	.144	.18	.117	.883	.389
Level 3	.16	.097	.24	.206	-1.066	.300
Level 4	.07	.101	.06	.072	.279	.784
Accuracy	.80	.194	.92	.091	-1.737	.099*
Paraphrase & Integration	1.31	.417	1.33	.706	-.054	.958
Intrusion	.06	.135	.11	.150	-.827	.419

Note. Text A=more difficult text; Text B=easier text
** $p < .10$

TABLE 8
T-Test Summary: Effects of Text Difficulty on Less Proficient Readers

Criteria	Text A		Text B		<i>t</i>	<i>p</i>
	Mean	<i>SD</i>	Mean	<i>SD</i>		
Content IU	.19	.027	.20	.048	-.541	.596
Level 1	.25	.075	.30	.073	-1.591	.131
Level 2	.22	.094	.21	.111	.343	.736
Level 3	.15	.118	.20	.200	-.545	.593
Level 4	.03	.061	.09	.095	-1.734	.102
Accuracy	.74	.106	.85	.107	-2.274	.037**
Paraphrase & Integration	.85	.249	.98	.300	-.999	.333
Intrusion	.053	.097	.052	.079	.026	.979

Note. Text A=more difficult text; Text B=easier text
** $p < .05$

The proficient readers included their own opinions and comments more in a summary of the easier text than that of the difficult text. This result is not in line with S. A. Kim's (2001) study where the participants expressed more personal comments in a summary of a difficult text. The mean scores of paraphrase and integration in both texts (1.31 vs. 1.33) show that for more proficient readers, paraphrasing and integrating skills were almost unaffected by text difficulty.

Like the more proficient readers, the summaries of less proficient readers also showed high accuracy rates in the easier text than the difficult one. The difference was larger for the less proficient readers ($t = -2.742$, $p < .05$). As with the mean score of accuracy, it can be said that the effects of text difficulty were found more clearly in the summaries written by less proficient readers. This result is consistent with the finding of S. A. Kim's (2001) study that the participants included more inaccurate information when summarizing the difficult text.

As seen in Table 8, the less proficient readers could identify more content idea units and idea units at Levels 1, 3, and 4 when summarizing the easier text: 20% content idea units, 30% idea units at Level 1, 20% at Level

3, and 9% at Level 4. Summarizing more difficult text, on the other hand, involved 19% content idea units, 25% idea units at Level 1, 15% at Level 3, and 3% at Level 4. A summary written by the less proficient readers also shows a higher mean score on paraphrase and integration in the easier text (.98) than the difficult text (.85). Yet the differences in the mean scores are not statistically significant. Thus, more research is needed to confirm that the more complex a text is, the more difficult it becomes for less proficient readers to identify and condense the content ideas accurately and concisely.

V. CONCLUSION

This study was designed to examine the effects of text difficulty and reading comprehension ability on Korean EFL readers' summary writing. The results of statistical analysis indicated that (1) The more proficient readers include more main ideas in their summaries of both texts than the less proficient readers. In short, higher-level readers were able to identify the important information and overall content ideas of the source text better than their

counterparts. (2) The more proficient readers were more skillful at integrating the ideas of the original text and reproducing them in their own words than the less proficient readers who were dependent more on copying the text and poorly integrated the ideas. Based on the results (1) and (2), it can be assumed that summary skills to select main ideas and reformulate ideas from the source text are decided by the level of reading ability. The results are consistent with those of previous studies (Chin, 2013; K. M. Kang, 2018; Taylor, 1984) while providing refuting evidence for Hidi and Anderson's (1986) study in which identifying main ideas from the original text is determined by the text difficulty. (3) How much accurate or inaccurate information the writer included in the summary was decided by the text difficulty. Regardless of the reading comprehension ability, inaccurate statements were more reduced in the easier text summarization in both groups. This result is aligned with S. A. Kim's (2001) study and it confirmed that easy reading texts could reliably be factors to improve summary writing concerning accuracy.

Meanwhile, some observations from previous studies were not confirmed in this study: According to Taylor (1984), more proficient readers have the ability to write a succinct summary by deleting trivial or redundant ideas. In this study, however, the more proficient readers included more intruded ideas in the summaries of both texts than their counterparts although the difference was not statistically significant. Further studies are needed to confirm if the reading ability does not enhance the awareness of the intrusion rule, so the proficient readers also need training on not using personal opinions when writing a summary. Also, S. A. Kim's (2001) assertion that students select more main ideas and express more personal comments in a difficult text was not confirmed either. Finally, S. A. Kim's (2001) claim that summarizing an easier text contains more integration of idea units is also required to be confirmed in future studies.

Based on these results, the following pedagogical approaches are needed by language teachers who intend to instruct summary writing for EFL university students in Korea. Given the fact that the participants in the study differently selected the main ideas from the source text according to their reading skills, the instructors should provide careful guidance to the less proficient readers on identifying main ideas and major details, especially from a difficult text. They should be able to distinguish what was important from what was not. Students at this level should also be exposed to more practice in combining content ideas across the text and rewriting them using proper paraphrasing strategies. Research suggests that summary activities can improve not only learners' English reading skills but also writing skills as a whole. However, it should be remembered that just because you are proficient readers does not mean you are good at the summarizing task. The explicit instruction on summary strategies will help students use them properly (Cordero-Ponce, 2000). However, rarely has such training been done in the Korean EFL classrooms and pedagogically the need becomes much clearer.

Finally, some limitations are obvious in this study: First, a small number of Korean EFL university students at only two proficiency levels were sampled. Therefore, the findings should be confirmed with larger student groups with various proficient levels in English in future research. Second, this study focused on text difficulty and reading comprehension ability as independent variables. Future studies need to explore the effects of different variables such as task loading, text genre, or the cognitive and affective domains of individuals on summary writing. Finally, to get insight into how students process the information in summarization and what summarizing strategies they use, introspective data should be gathered (e.g., retrospective reports or questionnaires). Notwithstanding these limitations, it is hoped that this study can provide more research-based materials and pedagogies to be useful for further research in this area and help language teachers to understand the summarization performance of Korean EFL university students.

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APPENDIX I
Summary Example from G1

The word Anthropocene coined by Dutch chemist Paul Crutzen in 2002 became the main topic of a scientific conference. And the concept was immediately picked up by researchers and began to appear regularly in the scientific press. But the author had a question of whether the word 'Anthropocene' satisfies the criteria used for naming a new epoch or not. So, if there is rock record of the present, the humane impacts have to show up as stratigraphically significant. The Zalastewicz's group thought it will be and they thought the reason of this is something we wouldn't expect. And then, the author mentioned obvious human impact that we expect like building cities, farming and deforestation. But he said the most significant human impact we wouldn't expect is the change in the atmospheric composition that is invisible to us. It is harmless to us immediately but it can raise global temperatures to levels that have never experienced before. In conclusion, our impact that is invisible now will be sudden and profound in future.

APPENDIX II
Summary Example from G2

Anthropocene, a concept suggested by Dutch chemist Paul Crutzen, refers to a period of great influence on the global environment. The writer warns of the adverse effects of mankind on the earth's lifetimes through the human age. The author informs that urban construction, agriculture, deforestation, and changes in the atmosphere are factors that greatly affect the global ecosystem. He alerts that changes in atmospheric composition among them cause the most serious changes in geology. It leads to global warming and rising sea levels. He ultimately proposes the term Anthropocene to be a broad alarming to humanity.