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Lexical Profiles of Korean EFL Summary Writing From Online Spoken Texts

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This study explores Korean university students' vocabulary use in summary writing from three different spoken texts. One hundred and thirty eight summary writing samples from 46 first-year university students were analyzed using *VocabProfile* to see whether the three spoken texts lead to different lexical profiles according to source texts and English language proficiency levels (vocabulary and reading scores on TOEIC). *VocabProfile* is an online program that classifies words in texts into first (K1) and second thousand (K2) levels, academic words (AWL), and the remainder or off-list words (OLW) based on word frequency lists. The data analysis revealed that students' lexical profiles in summary writing from three source texts were significantly different from each other with respect to all words except for AWL. Especially, the lexical distribution patterns in the summary writing samples were very similar to those in the three source texts. In terms of English proficiency levels in reading and vocabulary, no significant difference in lexical profiles was found according to students' reading scores, while students' vocabulary scores yielded significant differences in CW and OLW of the third source text, with no differences in the other two written summaries from the rest of the source texts. These findings suggest that, in comparison to reading and vocabulary proficiency, source text has a greater influence on Korean EFL learners' vocabulary use in summary writing. Also, vocabulary scores are more predictive of Korean EFL learners' vocabulary use in their summary writing than reading scores.

**[summary writing/lexical profiles/spoken source text/
요약쓰기/어휘프로파일/구어 원문]**

I. INTRODUCTION

As an alternative to the traditional writing test (e.g., writing-only task), integrated writing (reading-based writing) tasks are gaining attention because they include source texts as prompts and are very similar to academic writing tasks. These integrated writing tasks have also become increasingly popular in the field of second language (L2) study, often replacing traditional writing-only tasks in L2 writing classes. Integrated writing tasks have been reported to be more effective than independent writing tasks in improving L2 learners' writing abilities (e.g., Cumming et al., 2005; Plakans, 2008, 2010; Weigle, 2004). These studies have observed that, compared to a traditional writing-only task, integrated writing better reflects the authentic demands placed on university students. For example, Plakans (2008) compared the composing process of writing-only and reading-to-write test tasks and suggested that reading-to-write tasks led to a more authentic process. Most writers did more online planning during the reading-to write task and less during the writing-only task. The writing-only task required writers to use more effort in planning before writing rather than during writing. In particular, Plakans observed that the writing test takers preferred reading-to-write tasks because the source texts provided them with information, content, and ideas to apply in their writing.

In this vein, the writing of summaries has been considered an important task in measuring and acquiring L2 proficiency because it may tap into both the reading and writing abilities of L2 learners. Summary writing basically requires students to read source texts and write summaries. Reading a text can serve as an indicator of L2 learners' reading proficiency and display the depth of their understanding of the text. Written summaries can also be indicative of L2 learners' writing proficiency. Thus, summary writing involves students' abilities to integrate information from reading sources appropriately in their writing and to restate the main ideas of the original texts effectively in their own words.

Previous studies on summary writing revealed which factors have a greater influence on and what accounts for L2 learners' summarization performance. For example, Yu (2009) compared the effects of source texts and writers' language abilities on summary writing performance and reported that source texts had significantly and relatively larger effects than the summarizers' language abilities. Yu also found that summary writers think that macro-organization, frequency of unfamiliar words, topic familiarity, and length of source texts are the most influential factors in writing summaries. Similarly, Yang, Lu, and Weigle (2015) reported that topic had a significant effect on L2 students' syntactic complexity features. Other studies (Keck, 2006, 2014; Shi, 2004, 2012) examined how L2 learners paraphrase source texts in summary writing. These previous studies on paraphrase strategies indicate that L2 learners' heavy dependence on source texts in their summary writing stems from their lack of English proficiency. It has been found that L2 learners

cannot paraphrase the sentences from the source texts properly because of their low English proficiency.

Thus, it seems that research into L2 summary writing may have profound pedagogical implications to guide L2 reading and writing instruction. However, earlier studies have not provided enough discussion about different types of source text effects on EFL learners' summary writing from scripted spoken texts on different topics. EFL learners' vocabulary knowledge in the context of actual writing deserves to be noted and researched to better understand what is actually happening to their summary writing with a particular focus on vocabulary use in writing. While there is no conclusive evidence that any particular factor is the most influential in producing L2 summaries, there seems to be insufficient discussion about what Korean EFL learners' vocabulary use in summary writing from online spoken texts looks like. Therefore, the following research questions were raised for the present study.

1) Is there any significant difference in Korean EFL learners' lexical profiles in summary writing according to three different spoken texts?
2) Is there any significant difference in Korean EFL learners' lexical profiles in summary writing according to English proficiency levels in vocabulary and reading?

II. LITERATURE REVIEW

1. Effects of Source Texts on Summary Writing

The summarization task raises questions regarding its efficacy in dealing with source texts. The underlying assumption is that source texts are most likely to influence the ways in which L2 students use the source texts and how they incorporate the information from the source texts into their writing. Yu (2009) analyzed students' actual summarization performance and their perceptions of such effects through a post-summarization questionnaire and interviews to examine what properties of source texts constituted their summarizability, what extent the summarizability of source texts affected summarization performance, and how. Yu revealed that summary writing was more greatly affected by source text than writers' language abilities. Participants of the study reported that macro-organization, frequency of unfamiliar words, topic familiarity, and length of source text were the most influential factors affecting the summarizability of the text. Interestingly, Yu controlled the text length of the source texts to exclude the possibility of differential effects of short and extended texts on writers' summarization performance because length seemed

to be a serious issue for some student writers. Notably, Yu pointed out that different source text types such as narrative, expository, and argumentative texts may also have an effect on writers' summarization performance.

In this line of research, Jiuliang (2014) conducted an empirical study about how different source text types affect L2 test takers' summarization performance. He employed a narrative text and an expository text to explore genre effects on 86 Chinese students' summary writing in terms of the following three perspectives: summary scores, summary scripts, and perceptions of these effects as shown in questionnaires and interviews. The study results indicated that the students performed better on summaries from the expository source text than on those from the narrative source text. However, a mismatch between students' perceived difficulty and their actual summarization performance was observed. The participants compared the relative difficulty of the two texts and reported that the narrative text was easier to understand and summarize because it told a story and appealed to emotions, while the expository text dealt with scientific facts and statistics using technical vocabulary. The participants' superior performance on summary writing from the expository source text and their preference for the narrative text point to the possibility that source text type is very likely to affect L2 writers' summaries.

In another study about source text effects on summary writing, Chen and Su (2012) used a modified version of *The Adventures of Tom Sawyer* as a source text and revealed that the modified text worked well as a source text for EFL learners' summary writing. They investigated the instructional efficacy of a genre-based approach to teaching EFL summary writing for 41 university students (30 females and 11 males) in Taiwan. During instruction, the authors used a pretest and posttest to explore summaries written by students after they read *The Adventures of Tom Sawyer* modified to contain 400 headwords. The modified text was taken as a source text by the researchers because it had a well-structured organization, a clear narrative timeline, and low lexical diversity. In the second week, the students wrote a summary with a maximum of 500 words. They were instructed explicitly about how to write a summary of a narrative text. In the seventh week, the posttest was administered to the students. They wrote summaries under the same conditions as the pretest in terms of writing time and modification of the source text. All summaries were evaluated using the ESL Composition Profile (Jacobs, Zinkgraf, Wormuth, Hartfiel, & Hughey, 1981). The analysis results demonstrated that the students made significant progress in all four of the components provided by the ESL Composition Profile: content, organization, vocabulary, and language use. However, the students' summary writing showed different progress according to those evaluation areas. Their summary writing improved in content and organization more greatly than in vocabulary and language use. The authors concluded that the students benefited from the genre-based instruction in improving their summary writing. In addition to students' summary performance analysis, a focus group interview

was conducted with six volunteers out of 41 participants to gain insight into their perceptions of the summary tasks done before and after instruction. The interview data also indicated that the areas of vocabulary and language use were the two major obstacles to the students' summary writing. This empirical study is meaningful in that genre-based instruction can enhance L2 learners' summary writing abilities with more benefits to the improvement of content development and rhetorical organization than linguistic accuracy and lexical diversity.

Other studies have dealt with online texts as sources for summary writing. For example, Yamada (2002) used two media sources (news) on the same topic to investigate whether Japanese EFL writers can summarize and integrate media source texts. Yamada stated why the media sources were used in the study for two reasons. First, they lack tight cause-effect relationships, and this feature can help the EFL writers to stimulate their inferential processes. Second, the information in news items can allow students to use their world knowledge, resulting in more active thought processes. The students were asked to integrate two media sources and perform two writing tasks, one task involving more inferential processes than the other. Fifty-four summaries written by 27 students were analyzed, and the results showed that the writing task requiring the greater degree of inference led to a greater amount of idea generation.

Another study that used media sources was carried out by Li and Hoey (2014), who employed hard news texts from media sources to explore the strategies writers use to summarize and analyze the linguistic devices involved in their summary writing. The study results revealed that the writers used three strategies to incorporate the main points from the source texts in their summaries: deletion, selection, and abstraction. Li and Hoey maintained that these three strategies should be presented in the order just mentioned because abstraction is the most sophisticated strategy according to the difficulty hierarchy. They further explained that readers use the abstraction strategy when they give a series of instances to illustrate a common theme that is not explicitly shown in the text. The researchers also urged that linguistic devices such as subordinators, conjuncts, lexical signals, lexical repetitions, and parallelism should be taught to help students analyze relationships between propositions in written texts.

While the aforementioned previous studies suggest that different summary writing tasks lead to different lexical and linguistic features in summary texts, the effects of topic and spoken source text on Korean EFL learners' vocabulary use in summary writing has still not been given enough attention. In addition, it remains uncertain what aspects of Korean EFL learners' English proficiency are more greatly related to their vocabulary use in summary writing.

2. L2 Writers' Language Proficiency and Summary Writing

Many previous studies have reported a relationship between vocabulary knowledge and L2 learners' reading (e.g., Qian, 1999, 2002; Schoonen et al., 2003) and writing proficiency (e.g., Baba, 2009; Engber, 1995). There is a consensus that L2 learners' vocabulary knowledge is one of the strongest predictors of reading and writing proficiency even though the multidimensional nature of vocabulary knowledge is unclear and hard to define (Read, 2000). L2 learners' fluent access to vocabulary may lead to more attentional resources for higher-level aspects of reading and writing processes such as content and organization. Therefore, it may be worthy to explore how L2 learners use vocabulary in their summary writing according to their language proficiency.

Baba (2009) assessed four aspects of students' lexical proficiency in 68 Japanese EFL students' summary writing: vocabulary size, depth of vocabulary knowledge, word definition ability, and lexical diversity. The results showed that students' ability to define words made a significant contribution to their summary writing performance. This finding is noteworthy because reading comprehension and writing fluency, which have been generally assumed to be the most influential factors in writing, did not make significant differences to the summary performance of L2 students. In other words, word definition ability was more important for L2 writers' production of good summaries than reading or writing proficiency.

More recently, Li and Kirby (2015) reported a differential contribution of L2 learners' vocabulary knowledge to reading and summary writing. Li and Kirby examined the relationship between breadth (the number of words known) and depth (the richness of word knowledge) of vocabulary knowledge as well as the influence of these two dimensions of vocabulary knowledge on reading and summary writing performance. The authors measured 246 Chinese high school students' English language proficiency in the following four areas: word reading, vocabulary breadth, vocabulary depth, and reading comprehension. The students were given 15 minutes to read an expository source text containing 254 words and 10 minutes to write a summary text. The study results revealed that vocabulary depth contributed to summary writing, while vocabulary breadth significantly predicted students' reading comprehension proficiency, suggesting a differential contribution of L2 learners' vocabulary knowledge. It was also found that breadth and depth of vocabulary knowledge are moderately correlated.

Taking a different tack, S.-Y. Shin and Ewert (2015) reported that L2 learners' reading ability is closely related to their read-to-write task performance. They examined whether read-to-write tasks could be used as measures of both reading and writing abilities. This study developed data-driven analytic rubrics for reading-to-write task assessment in order to better distinguish between different aspects of 83 ESL college students' reading and

writing. The students were required to write response essays presenting their own perspectives after they had read two passages that provided opposing points of view on violent video games. The study revealed that there was a strong correlation between students' read-to-write task and independent reading scores. This finding is notable because Shin and Ewert reported on the relationship between L2 students' reading abilities and their read-to-write task performance rather than on the relationship between their vocabulary knowledge and read-to-write task performance.

Other studies have examined how L1 and L2 writers' integrate source texts into their summary writing with a particular focus on their language proficiency. For example, Shi (2004) examined L1 and L2 students' summary writing and argumentative writing to explore whether writing task and first language influence students' use of information in the source text. She tried to determine whether a summary writing task differs from argumentative writing in terms of the dependence on appropriate use of source information. Thirty-nine native English speakers and forty-eight Chinese learners of English participated in the study. Shi analyzed various types of textual borrowing in the participants' summary writing and argumentative writing to compare L1 and L2 writers' written production, using the following code scheme: exact or near verbatim retention of strings of words from sources with or without acknowledgement. The study found that both task and first language had an effect on the amount of words. Chinese students borrowed significantly more words from source texts without citation, and did not use references whether strings were copied or slightly modified from the source texts. On the other hand, the native English-speaking students used citations properly for both tasks, and employed shorter combinations of borrowed texts with six words or less than their counterparts did. Also, the students (both native students and Chinese students) who did summary writing borrowed more words than those who did argumentative writing.

Similarly, Keck (2006) compared L1 (n = 79) and L2 (n = 74) writers' use of paraphrasing in summary writing and classified attempted paraphrases into four types: near copy, minimal revision, moderate revision, and substantial revision. According to her, L1 writers used moderate and substantial revisions more frequently, while L2 writers relied on the source text more heavily. Interestingly, no statistical differences were found between L1 and L2 writers' use of minimal revisions in the study. Keck stated that L1 and L2 writers copying from source texts results from differences in cultural attitudes regarding the use of sources, language proficiency, and the context and purpose of the writing task. In addition, she pointed out that L1 and L2 writers' copying from source texts is a necessary phase through which developing writers must pass before they finally learn how to integrate sources into their writing in a more sophisticated way.

In a subsequent study, Keck (2014) reexamined L1 and L2 writers' summarization practices according to the same code scheme used in Keck (2006) and revealed that novice

writers, regardless of L1 and L2, tended to rely more on source text excerpts than more experienced writers. Also, she pointed out that caution is needed when exploring summaries written by L2 writers because she found that overall, the majority of L2 writers did not use many Exact Copies. Only four students out of 29 first-year students in the L2 group used nine or more, while the majority used fewer than three. This finding from the study suggests that L2 research on summarization practices should consider diverse individuals and not lump them together into one generic category.

Taken together, previous studies about the relationship between L2 learners' vocabulary knowledge and reading and summary writing strongly suggest that vocabulary plays a crucial role in reading and writing processes. However, research on EFL learners' vocabulary use in summaries from sources with spoken discourse features on different topics is rather scarce. Given the multiple aspects of vocabulary knowledge and its relationship to L2 reading and writing proficiency, it would be useful to look into Korean EFL learners' vocabulary use in summary writing from spoken English texts.

III. METHOD

1. Participants

The participants of the study were first-year students at a university in Seoul. They were from a reading class taught by the researcher. The two-hour reading class met once a week for 15 weeks. The students all used the same textbook and supplementary materials, so there did not seem to be any possibility of being affected by other factors related to writing practice. The students were assigned to the reading class based on a TOEIC test administered at the end of February of the same year as the study, with students having scored above 900 or below 400 being excluded from the course. The participants' TOEIC scores ranged from 400 to 850, and their average TOEIC score was 592.7. Their majors varied from engineering (civil engineering, computer science and engineering, material science and engineering, and electrical and computer engineering) to natural science (mathematics, physics, life science, statistics, and environmental horticulture). Four students having either missed one of the summary writing tasks or written a summary of less than 200 words were excluded. One more student was also excluded because he copied one of the three source texts. Thus, forty-six students were finally selected for the study out of an original total of fifty-one.

The students' proficiency levels were determined by using vocabulary and reading scores from TOEIC. The students were assigned to either the higher proficiency group or the lower proficiency group based on their average reading scores (24.11/48) and

vocabulary scores (28.77/40). The students with scores over the average were classified into the higher proficiency group and those with scores below the average into the lower proficiency group.

2. Summary Tasks and Source Texts

The students were required to produce three summaries from three different online source texts over the course of a 15-week semester. The source texts were chosen from the well-known free online site TED (http://www.ted.com). TED is a non-profit organization and their website contains a variety of talks that cover a wide range of topics from daily issues to academic fields, and provides full English transcripts of every talk, which served as source texts for the participants. Therefore, the source texts used in the study inherently bear the characteristic of being both online texts and spoken texts. This characteristic may also be closely related to authenticity, which is worthy to note because students are almost always exposed to online texts and spoken materials in this era of technology.

The students were allowed to use the transcripts and were told that their summary writing would count for 10% of their final grades for the course, under the category of homework. They were expected to produce good summaries with a minimum of 300 words each, and to post them on a website provided by their university. They were given three source texts entitled as follows: *Learning from Gecko's Tail* (T1), *Why We Have Too Few Women Leaders* (T2), and *How to Live to Be 100* (T3). These three different source texts were chosen to provide a more accurate, comprehensive picture of the students' vocabulary use according to different speech topics and their English proficiency levels. Also, the three summary writing sources were taken as extended class activities closely related to three textbook chapters covered in class. The source texts were analyzed in terms of readability levels and vocabulary features to match the research questions addressed by the study. Table 1 and Table 2 respectively show the readability indices (from https://readability-score.com) and lexical profiles (from http://www.lextutor.ca/vp/eng/) of the three source texts.

TABLE 1

Readability Indices of Three Source Texts

Source Texts	FKRE	FKGL	NOS	WPS
T1	79.3	5.0	178	11.1
T2	80.1	6.1	173	16.1
T3	70.6	7.1	224	14.7

Note. FKRE = Flesch-Kincaid reading ease, FKGL = Flesch-Kincaid grade level, NOS = number of sentences, WPS = words per sentences

TABLE 2

Lexical Profiles of Three Source Texts

Source Texts	K1 (%) (FW, CW)	K2 (%)	AWL (%)	OLW (%)	Tokens (N)	Types (N)	TTR (%)
T1	82.62 (55.62, 27)	6.64	2.58	8.16	1974	582	0.29
T2	90.67 (55.03, 35.64)	2.13	2.75	4.45	2764	646	0.23
T3	82.82 (50.15, 32.67)	4.42	2.65	10.10	3278	919	0.28

Note. K1 = most frequent one thousand words, FW = function words, CW = content words, K2 = second most frequent one thousand words, AWL = academic word list, OLW = off-the-list words, Tokens = number of words, Types = number of different words, TTR = type token ratio, N = number of cloze items

Table 1 shows that the three source texts vary in readability levels: FKRE, FKGL, NOS, and WPS. According to https://readability-score.com, a higher score on Flesch-Kincaid reading ease indicates easier readability. The website states that a Flesch-Kincaid grade level is equivalent to the number of years of education a person has had in the US education system. Also, it says that a grade level around 10-12 is roughly the reading level on completion of high school. Thus, a text with a comparatively higher score on the reading ease measure should indicate a lower score on the grade-level measure. According to Table 1, T3 has a relatively higher reading level than the other two source texts, showing an FKRE of 70.6. Table 2 displays the lexical profiles of the three source texts obtained using *VocabProfile* (Cobb, 2002). A higher percentage in lower frequency vocabulary words, such as K2 and OLW, means a higher text difficulty. More detailed explanations about the lexical features produced from *VocabProfile* are presented in Table 2. Differences in readability indices (Table 1) and lexical distributions (Table 2) are worth looking at because the first research question of the study is about the effects of the source texts on summary writing.

3. Data Analysis

The students were required to produce summaries of more than 300 words. Any summary writing samples with less than 200 words were excluded from the data analysis because short written texts are not stable enough to use *VocabProfile* (Cobb, 2002), as suggested in Laufer and Nation (1995). The students' written summaries were entered into *VocabProfile,* which calculates the percentage of lexical items according to four different word frequency levels: first and second thousand most frequent words (K1 and K2, respectively), academic word list (AWL), and off-list words (OLW). Function words (FW) and content words (CW) were also included in the analysis as subcategories of K1 to get a

more comprehensive picture of Korean EFL learners' vocabulary use in summary writing. Laufer and Nation suggested that students' use of low frequency words in their writing indicates both higher lexical richness and higher lexical proficiency at the same time. They concluded that the Lexical Frequency Profile yielded by *VocabProfile* is stable across L2 written texts on different topics and across texts written by the same writers. The number of words (tokens) of each summary was also counted via *VocabProfile* because usually, token has been considered an indicator of L2 learners' proficiency in writing (e.g., Cumming et al., 2005).

Lexical diversity calculated by type token ratio (TTR) was chosen as one of the lexical measures as well. Engber (1995) mentioned lexical diversity as a text feature that interacts with the essay quality score. TTR was assumed to reflect the information density of source texts and to affect the decisions learners make about which information to include, as suggested in many previous studies (e.g., Yu, 2009).

Students' summaries were thus analyzed with a particular focus on the relationship between students' vocabulary use in summary writing and other language proficiency factors such as vocabulary scores and reading scores on a standardized test of English, TOEIC. It may be undeniable that L2 summary writing involves a strong connection to L2 learners' vocabulary knowledge and reading comprehension abilities. L2 writers with low proficiency in vocabulary knowledge and reading comprehension may experience difficulty incorporating source text information into their summary writing, which fundamentally involves reading and writing abilities.

IV. RESULTS AND DISCUSSION

1. Lexical Profiles According to Source Text

A multivariate analysis of variance (MANOVA) from SPSS 21 was run to answer the first research question. As can be seen in Table 3, significant differences in the participants' lexical profiles were found in all areas of the lexical frequency lists as well as all other lexical measures (tokens, types, and TTR) except for AWL. Table 4 shows the mean differences in each lexical measure across the summary texts from three different sources used for the study. Put differently, the students' AWL alone was unaffected by the source text in their summary writing.

TABLE 3

Tests of Between-Subjects Effects: Lexical Profiles According to Source Text

Source	Dependent Variables	*df*	Mean Square	*F*	*Sig.*
Source Text	K1	2	2888.187	253.743	.000
	FW	2	449.957	19.211	.000
	CW	2	1682.046	157.607	.000
	K2	2	716.186	236.487	.000
	AWL	2	2.474	.924	.399
	OLW	2	865.578	219.615	.000
	Tokens	2	52287.920	15.258	.000
	Types	2	13552.891	19.239	.000
	TTR	2	.034	16.324	.000

One possible explanation for this study's results may be that students' vocabulary choices in summary writing were significantly affected by the vocabulary in the source texts. Even though there is a similar percentage of K1 in T1 (82.62%) and T3 (82.82%), the two source texts contain different percentages of FW and CW respectively: 55.62% (FW) and 27% (CW) in T1; and 50.15% (FW) and 32.67% (CW) in T3. This finding is notable because, as was shown in Table 2, AWL in each source text contains similar percentages (2.58% for T1, 2.75% for T2, and 2.65% for T3), whereas other lexical features show remarkable differences across the three source texts. Therefore, it could be assumed that the students' vocabulary in their summary writing was greatly affected by the vocabulary in the source texts.

Interestingly, Table 4 indicates that the mean percentages of AWL in student summary writing display a similar lexical distribution with no remarkable differences in each source text as follows: 4.73% (T1), 4.72% (T2), and 4.32% (T3). These are comparable to the percentages of AWL in source texts shown in Table 2, which were 2.58% (T1), 2.75% (T2), and 2.65% (T3). Hyland and Tse (2007) found that AWL was not evenly distributed across disciplines, with the lowest coverage in sciences (9.3%) and the highest coverage in engineering (11.1%). In this line of research, Dang and Webb (2014) found that AWL accounted for 4.41% of academic spoken English.

Other than AWL, it was revealed that CW, K2, and tokens in students' summary writing also clearly show similar patterns in the same order as the ones in the three source texts (see Table 2 and 4). These figures also confirm the speculation that students' vocabulary in summary writing is greatly affected by the vocabulary in the source texts. These findings could be further confirmed by future studies with different study populations and different types of summary tasks.

TABLE 4

Descriptive Statistics: Lexical Profiles According to Source Text

Dependent Variables	Source Texts	*M*	*SD*
K1	T1	72.97	4.58
	T2	88.81	2.45
	T3	80.69	2.68
FW	T1	45.77	4.64
	T2	50.92	6.22
	T3	45.26	3.17
CW	T1	27.19	3.05
	T2	38.98	3.12
	T3	35.42	3.61
K2	T1	10.17	2.19
	T2	2.56	1.13
	T3	4.56	1.74
AWL	T1	4.73	2.00
	T2	4.72	1.60
	T3	4.32	1.22
OLW	T1	12.13	2.28
	T2	3.91	1.16
	T3	10.43	2.30
Tokens	T1	274.57	40.57
	T2	302.85	49.02
	T3	341.72	78.94
Types	T1	152.7	22.53
	T2	151.33	19.96
	T3	181.72	34.75
TTR	T1	.56	.05
	T2	.50	.04
	T3	.54	.05

Many previous studies have already revealed that topic plays a crucial role in L2 students' vocabulary use in their writing (e.g., Reid, 1990) and vocabulary acquisition (S. Lee & Pulido, 2016). However, the findings of the present study are notable because they suggest that Korean EFL college students' vocabulary use in summary writing could also be significantly affected by the vocabulary used in online spoken texts as well.

2. Lexical Profiles According to Proficiency Levels: Reading and Vocabulary

The second research question asked whether Korean EFL learners' lexical profiles in summary writing were significantly different according to English reading and vocabulary proficiency. The students' English proficiency levels were identified based on their scores on the reading and vocabulary sections of TOEIC, a standardized English test. The students were assigned to either a higher or lower proficiency group based on their average reading scores (24.11/48) and vocabulary scores (28.77/40). As for reading proficiency,

seventeen students were allocated to the higher proficiency group and twenty-nine to the lower proficiency group. The students were again classified into a higher proficiency group (n = 22) and a lower proficiency group (n = 24) based on the average vocabulary score (28.77). MANOVA was performed to answer the second research question. Significant differences were found in the lexical profiles of summary writing from T3 alone according to vocabulary scores on TOEIC. The MANOVA results are displayed in Tables 5 and 6.

TABLE 5

Tests of Between-Subjects Effects: Lexical Profiles According to T3 and Vocabulary Scores

Source	Dependent Variables	*df*	Mean Square	*F*	*Sig.*
Source Text (T3)	K1	1	11.428	1.608	.211
	FW	1	28.204	2.929	.094
	CW	1	75.567	6.525	.014
	K2	1	5.486	1.848	.181
	AWL	1	.004	.003	.959
	OLW	1	33.440	7.192	.010
	Tokens	1	1136.550	.179	.674
	Types	1	.675	.001	.981
	TTR	1	.001	.308	.582

TABLE 6

Descriptive Statistics: Lexical Profiles According to T3 and Vocabulary Scores

Dependent Variables	Groups	*M*	*SD*
K1	High	80.17	2.45
	Low	81.16	2.85
FW	High	46.08	3.27
	Low	44.51	2.94
CW	High	34.09	3.43
	Low	36.65	3.38
K2	High	4.20	1.49
	Low	4.90	1.91
AWL	High	4.31	1.27
	Low	4.33	1.20
OLW	High	11.32	1.87
	Low	9.61	2.39
Tokens	High	346.91	95.36
	Low	336.96	61.96
Types	High	181.59	37.27
	Low	181.83	33.08
TTR	High	.53	.04
	Low	.54	.05

As mentioned earlier, the statistical analysis revealed that there was no significant difference in students' lexical profiles between the higher and lower reading proficiency groups, even though previous studies (Li & Kirby, 2015; Qian, 1999, 2002; Schoonen et al,

2003) reported that L2 learners' vocabulary knowledge is a powerful predictor of reading proficiency. In particular, this finding is in line with the results of Shin and Ewert (2015), who found a significant relationship between L2 learners' reading proficiency and summary writing. However, the present study found that Korean EFL learners' reading scores on a general English proficiency test is not predictive of their vocabulary use in summary writing.

According to the two vocabulary proficiency levels, significant differences in students' lexical profiles were found in the use of CW and OLW in summary writing from T3 alone. The results of MANOVA for T3 are displayed in Table 5. To be more specific about this statistical difference, Table 6 indicates that the lower vocabulary proficiency group produced a higher percentage of CW (high: 34.09, low: 36.65), while the higher vocabulary proficiency group yielded a higher percentage of OLW (high: 11.32, low: 9.61). The reason for the higher percentage of CW found in the less proficient students' summaries may be that the more proficient students produced a higher amount of FW in their summary writing than of CW. It seems that the more proficient students are more knowledgeable about how to use function words in their writing, which led to higher amounts of FW and less CWs.

On the other hand, students' lexical profiles in summary writing from the other two source texts (T1 and T2) did not show any statistical differences depending on their English proficiency levels in vocabulary. This finding partially supports the results of Li and Kirby (2015), which showed thatL2 learners' vocabulary knowledge (vocabulary depth) contributed to summary writing. Table 2 interestingly shows that, unlike the other two source texts, T3 contains more off-the-list words: 8.16% (T1), 4.45% (T2), and 10.1% (T3). It could be assumed that this finding may also be closely related to the previous results about the source text effect on vocabulary use in summary writing. It should also be noted that summaries written by Korean EFL writers might carry a greater amount of verbatim copying or near copies of source texts than their L1 counterparts as previous studies (Keck, 2006; Shi, 2004) revealed. Further study is needed to explore this aspect of Korean EFL learners' summary writing strategies. Taking all these results together, the present study supports with empirical evidence the claim that EFL students' vocabulary use in summary writing could be significantly affected by the vocabulary distribution in the source text.

The overall findings from the present study strongly suggest that source text had more significant or larger effects than students' English proficiency levels on their vocabulary use in summary writing. In addition, students' vocabulary scores on TOEIC were a stronger predictor of their vocabulary use in summary writing than their reading scores on TOEIC. A similar finding has been reported by Yu (2009), which found a greater effect of source text than writers' language proficiency on summary writing, but one of the

differences between Yu (2009) and the present study lies in the source text type.

V. CONCLUSION

The present study was conducted with 46 Korean EFL university students to explore how they use vocabulary in summary writing from online spoken texts according to source text and English proficiency. The students were asked to summarize three online spoken texts from TED, which is a well-known Internet website (http://www.ted.com). Their vocabulary in summary writing was analyzed by using *VocapProfile* (Cobb, 2002). The study results showed significant differences in Korean EFL learners' lexical profiles according to three source texts with the only exception being the academic word list. On the other hand, the students' reading proficiency identified by reading scores on TOEIC did not yield any statistical differences in students' lexical profiles in their summary writing, regardless of source texts. However, lexical proficiency identified by vocabulary scores on TOEIC led to statistically significant differences in content words and off-the-list words in summary writing from the third source text entitled *How to Live to Be 100* alone. To sum up, the present study results suggest that source text has more significant or larger effects than students' English proficiency levels on their vocabulary use in summary writing.

One pedagogical implication of the present study is that Korean EFL students should be provided with various summary writing tasks consistently to enhance their productive use of vocabulary in writing because student summary writing was found to be easily affected by the vocabulary in source texts. They need to be exposed to various source texts if they want to improve their vocabulary use in context according to source text topics. In addition, Korean EFL students should also be instructed to use strategies for effective summary writing that can help them carry out reading and writing tasks simultaneously. The explicit instructions of strategy use for Korean EFL learners are needed not only to produce good, effective summaries but also to improve vocabulary knowledge in context.

The study findings and pedagogical implications may help guide L2 students to the point at which they are finally able to acquire more sophisticated ways of integrating sources into their writing under different source contexts, whether spoken or written. However, the present study has several limitations, and suggestions can be made for future studies. The present study did not explore whether the students' summaries accurately capture the main points of the source texts. Additionally, the present study did not control for possible variables such as the length of source text or readability level. Also, the texts used for summary writing might have been rather challenging for some low proficiency students in terms of text length and vocabulary level. Shorter source texts with different text features

and vocabulary levels may have yielded different study results.

Further research is necessary to explore how Korean EFL college students summarize texts more specifically. Subsequent research on Korean EFL students' summary writing from web texts will resolve the aforementioned limitations of the present study in terms of English writing proficiency, citation practices, and paraphrasing strategies. A study of the lexical and grammatical changes made to the original sentences from source texts will also provide a better understanding of how Korean EFL learners summarize. In addition, it may be interesting to conduct further empirical verification studies to explore whether online spoken texts can serve as sources for more effective summary writing in comparison with online written texts, and to determine which factors should be considered first to enhance Korean EFL students' summarization abilities.

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Examples in: English
Applicable Languages: English
Applicable Levels: Tertiary

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