Vocabulary Learning Strategies Preferred by Korean University Students

Dennis Laffey[*]

Laffey, Dennis. (2020). Vocabulary learning strategies preferred by Korean university students. *English Teaching*, 75(4), 81-100.

This study compares the results of a survey of vocabulary learning strategy (VLS) use and perceived helpfulness by Korean university students to the taxonomy of VLS first presented by Schmitt. VLS suggested by previous research by the author and changes in technology since the original taxonomy was compiled were added to Schmitt's list. The survey was administered online to 135 university students in Korea, primarily of Korean nationality. The results show that reported VLS use is up across the board, and the perceived helpfulness of the majority of VLS is up as well. Technological VLS are widely used for meaning discovery, but used moderately for vocabulary consolidation. Trends in the results are discussed, which suggest that learners rely on a range of VLS rather than a few core VLS. Technological VLS are common among Korean university students, though most still prefer traditional methods. Ramifications for vocabulary teaching and strategy instruction are also discussed, as well as suggestions for further research.

Key words: EFL, vocabulary learning strategies, learner behaviors, learner preferences, Korean EFL learners, computer-assisted language learning

1. INTRODUCTION

Mastering vocabulary is one of the crucial factors for learning a foreign language, and vocabulary learning strategies (VLS) are the methods by which learners approach new vocabulary and try to integrate the new lexis into their developing interlanguage (Nyikos & Fan, 2007). Several early studies attempted to identify and classify VLS (Gu & Johnson, 1996; O'Malley & Chamot, 1990; Oxford, 1990; Schmitt, 1997) so that their usage, actual and perceived effectiveness, and teaching strategies related to each VLS could be studied. Since these early classification studies were published, leaps forward in technology, especially mobile computing via smartphone or tablet, have changed many learner behaviors and educational strategies (Lin & Lin, 2019). As learner behaviors and teaching strategies have changed in the past two decades, the earlier classifications of VLS and the preferences of learners regarding VLS use may also have changed. Previous research by the author (Laffey, 2016, 2017) suggest that this may indeed be the case. This study updates Schmitt's (1997) taxonomy with some internet and smart device related strategies, surveying students on which VLS they use and which they find helpful, with the intent of establishing a basis for future research of VLS effectiveness in the 21st century.

2. REVIEW OF THE LITERATURE

The subject of VLS was covered by Schmitt (1997) first by reviewing previous research and attempts at taxonomies, and then by presenting his own taxonomy. This new taxonomy made the logical decision to separate those VLS for meaning discovery and those used for consolidation of a word in memory. Schmitt (1997) includes not only this taxonomy, but data from a survey that expanded on the VLS listed, and also showed which VLS were used by the respondents as well as which ones were viewed as helpful. It also compared data from four different age cohorts: junior high school, high school, university, and adult.

Schmitt's (1997) taxonomy of VLS has been and continues to be an important reference for research into VLS, with many studies seeking to document what VLS learners in different contexts are using (Goundar, 2019; Hamza, Yasin, & Aladdin, 2017; Lee, 2009; Mokhtar, Rawian, Yahaya, Abdullah, & Mohamed, 2017; Park, 2001; Rachmawati, 2018, Wu, 2005). Schmitt's thorough yet open-ended listing of potential strategies, along with its categorization of meaning discovery and consolidation strategies, has made it a popular choice for other researchers. There are fourteen identified discovery strategies, and forty-four identified consolidation strategies in the taxonomy, including eighteen that were proposed by the subjects of the original survey. Schmitt also subdivides the listed VLS by

Oxford's (1990) categories of Determination, Social, Memory, Cognitive, and Metacognitive strategies, lending more versatility to the taxonomy.

While useful as a guide to the study of learner behaviors and the effectiveness of various VLS, Schmitt's (1997) taxonomy does present a bias toward traditional paper/text-based strategies. Of the fifty-eight VLS presented, the forty Schmitt originally included do not contain any references to technology beyond printed materials. Two VLS suggested by Schmitt's (1997) participants refer to using technology, those being "Listen to tape of word lists" (p. 208) and "Use English-language media (songs, movies, newscasts, etc.)" (p. 208). As Schmitt's survey was at the dawn of the Internet Age, it is unsurprising that internet resources were not listed, but it is telling that VLS using audio/visual media were suggested by the survey participants rather than by the survey creator.

Wu (2005) replicated Schmitt's (1997) survey with Taiwanese students (middle school, high school, and university) and found that when asked to distinguish between paper and electronic dictionaries, electronic dictionaries were used more and seen as more useful, although the numbers for both types of dictionary were close. Most other research surveyed for this study used unmodified versions of the Schimtt (1997) taxonomy (Goundar, 2019; Hamza et al., 2017; Lee, 2009; Mokhtar et al., 2017; Rachmawati, 2018), or deleted items that were thought to be unfamiliar to the subjects (Park, 2001). In addition to studies that gauge levels of use and usefulness among various populations of ELLs, other research uses the taxonomy as a basis for quantitative study of the effects of VLS on acquisition without consideration of the advances in technology in the past thirty years (Lee, 2009).

Previous research by the author of the current study suggests that at least among Korean university students, computers, internet, and smartphone resources are both popular and effective means for English language vocabulary learning (Laffey, 2017, 2019). In accordance with the observations made in the author's own research and by researchers such as Collins (2016) and Lin and Lin (2019) about the ways that technology has changed learner behaviors, an updated survey of VLS that incorporates internet and smartphone use seems warranted. The current study should be seen as a stepping stone to better VLS research in Korea, and possibly in other educational contexts, by providing insight into the current perceptions and behaviors of university-age Korean ELLs with regard to vocabulary acquisition. With a more solid and up-to-date understanding of ELL preferences, more effective research into the actual educational benefits of VLS and instructional methods that incorporate VLS can be conducted. In order to provide that basis, this study looks at three questions:

1. Which VLS do Korean university students use to discover meaning and consolidate vocabulary?

2. Which VLS do these students find helpful for meaning discovery and vocabulary consolidation?

3. To what extent are computer/internet-based VLS used and deemed helpful by Korean university students?

3. METHOD

3.1. Participants

The participants in this study consisted of 135 undergraduate university students studying in Busan, South Korea. Most were in second, third or fourth year of study, and respondents were primarily female. Most were also native Korean speakers, with a small number of Chinese, English, and Portuguese native speakers. Self-reported English proficiency levels show that nearly three quarters believe themselves to be low- or high-intermediate level ($n = 100$), with the remainder nearly evenly split between lower proficiency ($n = 19$) or higher proficiency/native speaker level ($n = 16$). Details of the participants can be seen in Table 1.

TABLE 1

Demographic Data

Gender	Grade	Major	L1	English Proficiency[b]
Male $n = 43$	1st Year $n = 1$	English $n = 108$	Korean $n = 126$	Beginner $n = 4$
Female $n = 90$	2nd Year $n = 29$	Humanities $n = 16$	Chinese $n = 6$	Basic $n = 15$
Other $n = 2$	3rd Year $n = 50$	Double major[a] $n = 4$	English $n = 2$	Low Inter. $n = 48$
	4th Year $n = 53$	Engineering $n = 2$	Portuguese $n = 1$	High Inter. $n = 52$
	5th Year $n = 2$	Fine Arts $n = 2$		Advanced $n = 13$
		Social Sciences $n = 2$		
		Sciences $n = 1$		Native $n = 3$

[a] Double Majors: English/Humanities (2), English/Fine Arts (1), English/Engineering (1).
[b] Proficiency levels compared to CEFR: Beginner A1, Basic A2, Low Inter. B1, High Inter. B2, Advanced C1.

3.2. Design of the Survey

The design of the survey followed Schmitt (1997), in providing a menu of potential VLS and asking participants to rate them in actual use and perceived helpfulness. While some replications of Schmitt (1997) have eliminated strategies not believed to be pertinent to the educational context in which the replication was taking place (Park, 2001; Rachmawati, 2018), others such as Chen (as cited in Wu, 2005) added items to the list, especially items related to advances in technology. As this study intends to be used as a reference point for

future studies, the decision was made not to eliminate any of the strategies listed by Schmitt (1997). Additional methods of research and data analysis are likewise left to future studies, so that the current results are more easily compared to the original data. The following meaning discovery strategies were added to the survey in this study:

- Use an electronic dictionary
- Use a smartphone dictionary app
- Use an online dictionary
- Use an online translator
- Compare to a similar known English word
- Keep reading, hoping the meaning will become clear

The final two meaning-discovery VLS added, comparing a similar known English word and continuing to read until the meaning becomes clear, were based on the author's previous study (Laffey, 2017) in which these two strategies were commonly reported as used by participants and observed in use by the researcher. The following consolidation strategies were also added to the survey in this study:

- Use a smartphone language learning app
- Use an online language learning program

Once the survey items were determined, they were translated into Korean with the assistance of two Korean native speaking colleagues. The translations were then checked with two other native Korean speakers for comprehensibility. Once the translation was determined as accurate, the survey items were entered into a survey form using Google Forms, as a series of yes/no questions. All items on the survey were bilingual, in English and Korean. After a section asking for demographic data on participants, users were asked to rate their use of meaning discovery strategies. The third section asked them to rate their perceived helpfulness of meaning discovery strategies. The fourth section asked about the use of consolidation strategies, while the fifth section asked to rate the perceived helpfulness of consolidation strategies. At the end of the second and fourth sections (use of VLS), an item requesting suggestions on other VLS was given. At the end of sections three and five, an item asking to rate the five most helpful strategies was given, these additional questions also following Schmitt (1997). The survey can be accessed at: https://forms.gle/pzuYJgUULuLE3nQs6

3.3. Survey Procedure and Data Analysis

Links to the survey were given to students (primarily English majors) enrolled in classes taught by the researcher, and also to students (mostly non-English majors) enrolled in classes taught by a colleague at a different university in the same city. The students were offered a small amount of extra credit points to take the survey, but participation was strictly voluntary. Once the surveys were completed, descriptive data was taken from Google Forms and compared to that given by Schmitt (1997).

The current study's participants are limited to university students while university students made up only a quarter of participants in the original study. To compare data between the current study and Schmitt's (1997) results, the top ten and bottom five most used strategies and most helpful strategies in this survey were compared to those given by Schmitt (1997). Changes in the percentages of respondents' use and perceived helpfulness was compared to those listed by Schmitt (1997). VLS which were suggested by Schmitt's original participants, and those added to the current survey are not able to be compared in this way, but the numbers may provide some insight into changes in learner behaviors over the past twenty-five years.

4. RESULTS

4.1. Survey Data

The survey was conducted online via Google Forms, which also aggregates the results as both hard numbers and percentages. This data is taken directly from Google Forms and, as there is a large amount of data, it is presented in the Appendix. Schmitt (1997) presents numbers rounded to whole percentages, but Google Forms gives one decimal place. This level of detail is retained in the numbers reported here as that may be of more use to subsequent scholarship than rounding as done by Schmitt.

The numbers reported by the current study show a greater amount of VLS use by contemporary Korean university students compared to the amalgamated results of Japanese English learners of middle school, high school, university, and adult levels in the 1990s. For the strategies where comparison is available, use of strategies in the current study is higher, ranging from "skip or pass the new word" at only 9.4% higher than Schmitt's (1997) results to "use the keyword method to remember words" at 75.9% higher usage. The average increase among the forty VLS that can be compared to Schmitt (1997) is 37.14%. VLS use among this population is noticeably more common.

The numbers reported on VLS perceived helpfulness in the current study are also in general higher than Schmitt's (1997) numbers, but in five out of the forty VLS the perceived helpfulness is down. The difference in responses range from the largest decrease for "analyze any available pictures or gestures" at -7.7% to a high of "imagine the word form/spelling" which is 62.4% higher than Schmitt's (1997) results. The average change among the forty VLS that can be compared is a 13.96% increase over Schmitt's numbers. Strategy use appears to have increased in the intervening years, but perceptions of which VLS are most helpful have only increased a modest amount.

4.2. Comparison of Most Used and Most Helpful VLS

Following Schmitt (1997), the top ten most widely used VLS and bottom five least widely used VLS are highlighted, followed by the top ten and bottom five VLS most and least widely perceived as useful. As the survey only gave a binary option of used/not used, and helpful/not helpful, these numbers represent only how common it is to use these VLS or how widely they are perceived as helpful. Table 2 shows the participants' ranking of most and least used strategies.

TABLE 2
Most Used and Least Used Strategies

Rank /66	Vocabulary Learning Strategies	%	Type	Change
	Most used strategies			
1	Use an online dictionary	97.8	Meaning Discovery	NA
2	Use a bilingual dictionary	97.0	Meaning Discovery	+12.0%
3	Take notes in class	96.3	Consolidation	+32.3%
4	Study the sound of the word	94.8	Consolidation	+34.8%
5	Guess from context clues	94.1	Meaning Discovery	+20.1%
5	Use a smartphone dictionary app	94.1	Meaning Discovery	NA
5	Study the spelling of the word	94.1	Consolidation	+20.1%
8	Compare to a similar known English word	93.3	Meaning Discovery	NA
8	Use verbal repetition	93.3	Consolidation	+17.3%
8	Use written repetition	93.3	Consolidation	+17.3%
8	Keep a vocabulary notebook	93.3	Consolidation	NA
	Least used strategies			
62	Ask a teacher to check flashcards or word list for accuracy	31.1	Consolidation	+28.1%
63	Use flash cards to find the meaning	30.4	Meaning Discovery	NA
64	Put English labels on physical objects	24.4	Consolidation	NA
65	Use the Peg Method to remember words	18.5	Consolidation	NA
66	Use semantic feature grids when studying	16.3	Consolidation	NA

Several of the most widely used VLS have identical scores, resulting in a top eleven rather than a top ten. Of these eleven, seven are identical to top ten used strategies listed in

Schmitt (1997, p. 219), but the rankings of some have switched. Using a bilingual dictionary is still the most used among Schmitt's original VLS, guessing from context clues and studying the spelling are still evenly ranked near the middle. Taking notes in class and studying the sound of the word have moved up, while using verbal repetition and using written repetition have moved down slightly. Keeping a vocabulary notebook was a VLS suggested by participants in Schmitt (1997) so it could not appear in those rankings, but is listed as a top ten VLS here. Using an online dictionary, using a smartphone app, and comparing to a similar known English word are VLS appearing in the top ranks which were added in this survey.

Looking at the least-used VLS, the numbers are higher than those at the bottom of Schmitt's (1997) results, which ranged from 13% of respondents, using physical action, down to only 3%, teachers checking flash cards for accuracy (p. 219). The other three low ranking VLS in this study were all ones suggested by Schmitt's (1997) respondents, so comparison is difficult. Looking at the lowest used VLS Schmitt reported that are not listed here, using physical action still ranked relatively low, but using L1 cognates for both meaning discovery (83.7%) and for consolidation (80.7%) ranked much higher among the current participants.

As with the rankings of most used, identical scores result in thirteen VLS ranked as the most widely viewed as helpful, with five ranked as least widely viewed as helpful, as shown in Table 3, below. Compared to Schmitt's (1997, p. 221) results, there are some curious differences. Five of the most widely viewed as helpful VLS are the same, although in different positions. Online dictionaries are most widely seen as helpful in this survey. Using a bilingual dictionary was the most widely reported as helpful VLS in Schmitt (1997), but here it drops to a tie for sixth place, and is the only one of the top strategies reported here with a lower percentage than in Schmitt (1997), although the difference is modest at -1.7%. Most interestingly, imagining a word's meaning was the fifth lowest ranked VLS in Schmitt (1997), but it ties for the third most widely viewed as helpful spot in this survey. While using an online dictionary, keeping a vocabulary notebook, and interacting with a native speaker cannot be compared to the earlier results, the other VLS most widely seen as helpful in this survey are all up compared to Schmitt (1997).

Looking at the least widely viewed as helpful VLS, two were rated in the earlier study, but both have increased in percentages: using semantic maps like word webs, and skipping or passing the new word. Skipping the new word was the lowest ranked VLS in Schmitt (1997) and in the current survey, although more participants in the current study viewed it as useful, being up 12.9%. The other three VLS at the bottom cannot be compared to the earlier study, but have scores in a similar range as the VLS viewed as the least helpful in Schmitt (1997). Looking at the three low-ranking VLS in Schmitt (1997) that are not in the bottom five in this survey, all show large gains in perceived usefulness: using cognates

when studying the word (+88.2%), using the Keyword Method (+89.6%), and imagining the word form or spelling (+84.4%).

TABLE 3
Most Helpful and Least Helpful Strategies

Rank /66	Vocabulary Learning Strategies	%	Type	Change
	Most helpful strategies			
1	Use an online dictionary	99.3	Meaning Discovery	NA
2	Use verbal repetition	95.6	Consolidation	+11.6%
3	Imagine the word's meaning	94.1	Consolidation	+56.1%
3	Use written repetition	94.1	Consolidation	+3.1%
3	Keep a vocabulary notebook	94.1	Consolidation	NA
6	Guess from context clues	93.3	Meaning Discovery	+20.3%
6	Use a bilingual dictionary	93.3	Meaning Discovery	-1.7%
6	Take notes in class	93.3	Consolidation	+9.3%
9	Interact with a native speaker	92.6	Consolidation	NA
10	Connect the word to a personal experience of yours	91.9	Consolidation	+29.9%
10	Use new words in sentences	91.9	Consolidation	+9.9%
10	Study the sound of the word	91.9	Consolidation	+10.9%
10	Say the new word aloud when studying	91.9	Consolidation	+0.9%
	Least helpful strategies			
62	Use semantic maps like word webs	52.6	Consolidation	+5.6%
63	Underline the initial letter of the new word	41.5	Consolidation	NA
64	Use the Peg Method to remember words	37.8	Consolidation	NA
65	Use semantic feature grids when studying	32.6	Consolidation	NA
66	Skip or pass the new word	28.9	Consolidation	+12.9%

In addition to the binary distinction of whether a VLS is considered helpful or not, the survey asked respondents to rank their top five VLS in order of preference. Schmitt (1997) provides both a flat numerical ranking of how many times a particular VLS was listed in the top five, as well as a weighted ranking with the #1 spot given five points, the #2 spot four points, and so on. The same method has been used here. The maximum score on the numerical ranking in the current survey is 135, and the top score on the weighted ranking is 625. A small number of participants skipped this question, listed more or less than five VLS, provided nonsensical answers ("eat ramen noodles," "watch TV"), or gave vague answers ("ask the teacher" when three distinct VLS involve asking teachers for different types of information). Nonsensical answers were eliminated, and vague answers were skipped but retained their place value for the weighted rankings. Table 4 shows the rankings for the meaning discovery VLS, while Table 5 shows the rankings for consolidation VLS.

TABLE 4
Meaning Discovery Helpfulness Ratings Results

Strategy	Numerical Rating /135 max	Weighted Rating /625 max
Guess from context clues	73	209
Use a bilingual dictionary	52	183
Use a monolingual English dictionary	49	163
Use an online dictionary	48	178
Analyze the root word and any affixes	45	130
Use a smartphone dictionary app	41	148
Compare to a similar known English word	35	107
Analyze the part of speech	34	104
Ask a teacher for a paraphrase or synonym	33	88
Ask a teacher for a translation	30	77
Ask a teacher for an example sentence	28	78
Use an online translator	27	79
Keep reading, hoping the meaning will become clear	24	50
Compare to a similar word in your native language	22	60
Ask a classmate or friend the meaning	19	51
Analyze any available pictures or gestures	14	42
Use an electronic dictionary	13	43
Use flash cards to find the meaning	12	22
Discover the meaning through group work activity	10	35
Use a word list to find the meaning	8	15

Among the current survey participants, there is a strong preference for guessing from context clues, which easily leads both the numerical and the weighted rankings. Dictionaries of any type (bilingual English-L1, monolingual English, and online) are all similarly ranked in both measures, with a slight preference for bilingual dictionaries in either measure, and monolingual and online dictionaries swapping places between the numerical and weighted rankings. Compared to the above results of how widespread use and perceived helpfulness of the various meaning discovery VLS, there are some small discrepancies. In particular, online dictionaries are the most widely used and most widely seen as helpful, but only around one third of participants ranked them in the top five based on the numerical ranking. This may suggest that certain strategies, such as reliance on online dictionaries, are used due to convenience more than for effectiveness. Every meaning discovery VLS received a top five rating by at least a small subset of the participant population, suggesting that for meaning discovery there are many different preferences and styles for attacking the problem of a new unknown word.

TABLE 5
Consolidation Strategy Helpfulness Ratings Results

Strategy	Numerical /135	Weighted /625
Use verbal repetition	50	179
Continue to study the word over time	40	148
Use written repetition	39	127
Interact with a native speaker	38	135
Test yourself with word tests	38	123
Use English-language media	37	115
Use new words in sentences	27	80
Keep a vocabulary notebook	26	71
Connect the word to its synonyms and antonyms	25	78
Use spaced word practice	18	60
Connect the word to a personal experience of yours	17	51
Use an online language learning program	16	56
Imagine the word's meaning	16	48
Learn the words of an idiom or phrase together	16	41
Say the new word aloud when studying	15	43
Study the sound of the word	14	40
Take notes in class	14	34
Use word lists	13	33
Use a smartphone language learning app	12	42
Use cognates	12	30
Use the Keyword Method to remember words	12	30
Remember the affixes and roots	12	24
Paraphrase the word's meaning	12	21
Listen to a recording of the word	11	31
Study the spelling of the word	10	22
Study the word with a picture of the meaning	9	31
Group words together within a story line	9	17
Study and practice the meaning in a group	7	23
Put English labels on physical objects	7	17
Study the configuration of the new word	6	17
Use flash cards	5	22
Use "scales" for gradable adjectives	5	12
Use the Peg Method to remember words	4	13
Group words together to study them	4	12
Use physical action when learning words	4	10
Remember the part of speech	4	6
Use the vocabulary section in your textbook	4	6
Associate the word with its coordinates	3	7
Imagine the word form/spelling	3	6
Use semantic feature grids when studying	2	6
Use the Loci Method to remember words	2	4
Skip or pass the new word	1	3
Ask a teacher to check flashcards or word list for accuracy	1	2
Group words together spatially on a page	1	2
Use semantic maps like word webs	1	1
Underline the initial letter of the new word	0	0

Looking at consolidation VLS, six cluster at the top, with a slight preference for verbal repetition. The weighted rankings for the second through sixth place VLS vary slightly, but all remain at the top. There does not appear to be a single trend among them, but verbal and written repetition plus continuing to study the word over time and self-testing suggest a preference for behaviorist conditioning, while interacting with native speakers and using English language media suggest a preference for authentic language input. Compared to the VLS listed as most widely used and most widely perceived as helpful, there are some differences. Aside from verbal and written repetition, the most widely used consolidation VLS are not seen as particularly effective. As with meaning discovery VLS, the preferences are spread over the entire list, with only "underlining the initial letter of the word" getting no votes at all. Also, the more technological VLS seem to be less preferred for consolidation of the new word into the learner's interlanguage in favor of more traditional means.

5. DISCUSSION

5.1. VLS Used by 21st Century Korean University Students

In the current survey, the first obvious trend in VLS usage is that the participants are willing to try a wide range of VLS in order to discover the meaning of an unknown word or consolidate a new word into their interlanguage. The reported rates of usage for most VLS on the survey were higher than in previous studies, suggesting that strategic vocabulary learning is a common occurrence for the population being studied. Harmer (2007) claims that "students need to be encouraged to develop their own learning strategies so that as far as possible, they become autonomous learners" (p. 394). The findings of this study suggest that 21st century English learners are receiving the tools they need to achieve learner autonomy.

Looking at the use of meaning discovery VLS, the top five most widely used contain three versions of searching for the meaning in a dictionary: online, bilingual, and smartphone app dictionaries. The other two rely on the learner's reasoning skills to guess the meaning: using context clues and comparing to similar words known. Four of the five least relied upon VLS involve asking for help: asking the teacher for the meaning, a paraphrase, or example sentence, and relying on group work. The least used was relying on flashcards. As flashcards are generally intended for consolidation, this lowest rank makes intuitive sense. The low rates of usage of asking teachers for help might be considered an aspect of Korean culture, but some research suggests the reticence of East Asian students is more situation specific than cultural (Cheng, 2000). The lack of reliance on the teacher as a

source for word meanings may be another sign of the increased learner autonomy expected of university age learners, as learners armed with the strategies they need to discover word meanings independently are not forced to rely on their teachers for help.

Turning to consolidation strategies, the top five most widely used VLS are all self-study methods: note taking, studying the sound and spelling of a word, and verbal and written repetition. This makes sense for learners in an EFL environment, such as Korea, as chances to interact in the L2 are limited. The highest ranked social strategy, interaction with a native speaker, was 19th in terms of use. Looking at the use of technology, reliance on English language media ranked 17th. It seems that among these participants, personal and more traditional methods of consolidation of new words are the most widely used. Some of the most widely used consolidation strategies, such as note-taking in class or studying the sound and/or spelling of a word, are only considered moderately helpful, and some that ranked highly in terms of helpfulness, such as the use of English language media or interacting with native speakers, as mentioned above, were ranked moderately for use. This mismatch in consolidation VLS reported to be used and those reported to be helpful suggest that the methods used by learners may not be the most effective ways for learners to integrate new vocabulary. Further studies may wish to investigate if similar trends are found in other populations, and seek for ways to better guide learners to helpful VLS use for purposes of vocabulary consolidation.

5.2. VLS Considered Helpful by 21st Century Korean University Students

The helpfulness of the VLS examined by this survey has two different means of ranking: how widely they are considered helpful by the participants, and how highly each is ranked when asked to list the five VLS considered to be the most helpful. The first measure tells us that in general, Korean university students seem to find a variety of VLS at least somewhat helpful. Fifty-four of the sixty-six VLS surveyed were considered helpful by 70% or more of the participants, as can be seen in the Appendix. Most participants surveyed found at least some value in the majority of VLS, which suggests again that strategy training in language education may be having the desired effect (see Harmer, 2007, mentioned above). Because of the generally high response regarding helpfulness of the VLS, how widely each VLS is seen as helpful provides little insight. The ranking of VLS offers more insight into how helpful 21st century Korean students view the various VLS.

Among the meaning discovery VLS, the top six include using context clues, dictionary look-ups of various types (bilingual, monolingual, online, and smartphone app), and analysis of the root word and affixes. Monolingual dictionaries were third and online dictionaries fourth in the numerical ratings, but switched positions in the weighted ratings.

Similarly, analyzing roots and affixes was fifth and smartphone app dictionaries sixth in the numerical ratings, but places were reversed on the weighted ratings. Context clues were by far the preferred VLS, with 73 of 135 respondents placing it in their top five, and a weighted ranking of 209 out of a possible 625. Of the highly ranked dictionary-based meaning discovery VLS, monolingual English dictionaries were seen as very helpful, while their reported use was only moderate. A similar trend occurs with analysis of roots and affixes. This suggests that more instruction into the use of certain VLS might be warranted. Online dictionaries ranked first in how widespread their use is, and their high ranking in helpfulness shows that many learners find them effective, but their perceived helpfulness is still lower than that of traditional printed dictionaries, which points to a preference for traditional means of meaning discovery.

At the bottom end, participants ranked analysis of pictures or gestures, electronic dictionaries, flash cards, group work, and word lists as least helpful. University level reading tends to have fewer illustrations than those for younger learners, and portable electronic dictionaries have fallen out of favor as they have been superseded by the smartphone (Collins, 2016). Flash cards and word lists are only helpful for learning the meaning of a new word if that new word is already included when the cards or list are produced. Considering the low ranking of group activities, Lightbown and Spada (2006) state that:

> tasks can be devised in such a way that learners working together can discover how to express or interpret meaning in the second language. In order for this to happen, the tasks must be carefully planned to give learners access to new language they need. (pp. 191-192)

Without this careful planning on the part of instructors or materials developers, learners are unlikely to gain much benefit from this VLS.

Among consolidation strategies, the top ranked VLS involve repetition and repeated exposure to the words. Verbal repetition, the most widely reported as helpful, was highest ranked on both measures, with 50 of 135 participants stating that they find it helpful in the numerical ranking, and a score of 179 out of a possible 625 on the weighted ranking. Written repetition (third numerically, fourth weighted) and using self-tests (fifth on both scales) also rely on repetition in order to consolidate meaning. Studying the word over time (tied for fourth numerically, fifth weighted) and interaction with native speakers (tied for fourth numerically, third weighted) suggest that learners find interaction with texts or other people to also be effective. Of these VLS, only verbal and written repetition rank among the most widespread for use. Learners who study a word over time, interact with native speakers, or use self-directed vocabulary tests tend to rate these VLS highly. Nineteen out

of the forty who listed continuing to study a word over time put it in the number one spot, while eighteen of thirty-eight who listed interaction with a native speaker put it in the top spot. Verbal repetition was rated number one by only sixteen out of fifty participants that ranked it in the top five, although it received an equal number of second place votes. Future educational materials may wish to focus more on training these VLS, as the learners who use them claim to find them very effective.

At the low end of the ratings, the bottom five were skipping or passing the word, having a teacher check word lists/flash cards, grouping words spatially, using semantic maps like word webs, and underlining the initial letter of a word. As it is an avoidance strategy, it is not surprising to see skipping an unknown word at the low end of the usefulness rankings. Only one participant listed it in the top five, in third place. Underlining the initial letter of a word is the only VLS not to be ranked by any participants. For the most part, these VLS are not highly prized by learners. However, they have higher reported levels of use and are more widely perceived as helpful. They rank so low here because learners view them as less effective in comparison to other VLS, not because they lack any value at all.

5.3. Prevalence of Computer/Online VLS Among Korean University Students

The data here suggests that Korean university level English learners often rely on computerized or online resources for meaning discovery, and tend to find these methods useful. Online dictionaries were the most widely used VLS, and the most widely viewed as helpful. All but three respondents claimed to have used online dictionaries to look up new words, with only one claiming this VLS was not helpful. It also ranked fourth in the numerical ratings of helpfulness, and third in the weighted rating. Using a smartphone dictionary app, using an online translator, and using an electronic dictionary are all widely used VLS, each being utilized by 85% or more of the respondents. Smartphone dictionary apps and electronic dictionaries are each viewed as helpful VLS by around 90% of respondents, while online translators are viewed as helpful by around three quarters. This shows that Korean university students are highly reliant on technology for discovering the meaning of unknown words they encounter. One respondent gave explanations for their first and second place rankings of using online dictionaries and online translators, respectively. For both, the ability to look up meanings quickly was given. This would seem to be a satisfactory explanation for the high ratings of technology-based VLS for meaning discovery.

For consolidation of new vocabulary, technological VLS are used somewhat less broadly and are seen as slightly less helpful. All four of the technology-based VLS for vocabulary consolidation are positioned in the middle to lower levels of both VLS use and

perceived helpfulness. Using English language media to consolidate vocabulary is used by 84% of the respondents, with sixteen other VLS used more broadly. It is, however, seen as helpful by 91% of the respondents. The same respondent who gave explanations for the meaning discovery VLS top five rankings also explained why they chose using English language media as the second most helpful consolidation strategy: "Actually through this way, I could improve my English a lot. Because it is not boring and I can study on my own." Listening to recordings of the word, using smartphone language learning apps, and using online language learning programs do see use, with the lowest, online language learning programs, having been used by 62% of the participants of the survey. The participants do see these VLS as more helpful, though, with 84% saying listening to recordings is useful, and 79% saying both smartphone and online language learning apps/programs are helpful. These technology VLS are seen as helpful, but are not so widely used. As the participant quoted above suggests, these VLS may be seen as either less interesting or else not as easy to access for individual students. However, this is speculation that would require qualitative studies or quantitative surveys of learner motivation to validate.

In general, it seems that technology is often used for initial meaning discovery due to convenience, while more traditional methods of vocabulary consolidation are still the norm among Korean university students. Convenience and speed appear to make technological VLS superior methods for initial understanding of a word, which is in line with results presented by Collins (2016) on learners' preferences for smartphones when studying. While technological means of vocabulary consolidation are used fairly broadly and viewed positively, traditional offline methods are still seen as superior. As there is evidence that technology-mediated vocabulary study is effective (Lin & Lin, 2019), this is an area that may need attention. The reasons why technological consolidation VLS receive less attention from Korean university level learners are not clear from the data presented here, and this is an area where further studies may provide insight.

6. CONCLUSION

This study presents the results of a survey that replicated and expanded upon Schmitt's taxonomy survey (Schmitt, 1997). The survey asked about use and perceived helpfulness of a wide range of VLS for meaning discovery and vocabulary consolidation, and the results show some shifts in usage since the late 1990s. VLS use and perceived helpfulness is up overall, and a variety of methods are preferred. There is an apparent trend in VLS use toward technology assistance and autonomous engagement for meaning discovery, while VLS use for consolidation is heavily focused on repetition and also rely on autonomous

engagement more than on social interactions. Learners tend to see value in a variety of VLS, even ones they seldom rely upon. However, some learners tend to rely on VLS that they do not view as particularly helpful. The implications that can be drawn from this are that Korean ELLs are being provided with the strategic tools they need to acquire vocabulary, but instructors may need to provide them with better instruction on self-evaluation of VLS, so learners can better tailor their strategic toolbox.

The results of the survey reported here are merely suggestive, and are intended to serve as a baseline for future studies into the use and effectiveness of VLS. The data here as some limitations. Schmitt (1997) compiled data from many more respondents, from four different age groups, while the current study focuses on university learners, which limits the broader applicability of the data. More importantly, raw data from the original survey was not available for statistical comparisons. More studies in a variety of contexts and with different ages of participants should be conducted in order to for a basis for statistical analysis of the apparent trends in the raw data presented here. Studies of the actual effectiveness of VLS that learners use or consider helpful will provide useful insights for classroom pedagogy. In addition to such quantitative studies, qualitative surveys and interviews of learners may be needed to provide more insight into why certain VLS are used or not, and why some are seen as helpful while others are not. With additional studies of these sorts, VLS use and effectiveness can be improved and learners may find vocabulary acquisition easier.

Applicable levels: Tertiary

REFERENCES

Cheng, X. (2000). Asian students' reticence revisited. *System*, *28*(3), 435-446.

Collins, J. B. (2016). Changes in electronic dictionary usage patterns in the age of free online dictionaries: Implications for vocabulary acquisition. *APU Journal of Language Research*, *1*, 36-49.

Goundar, P. R. (2019). Vocabulary learning strategies (VLSs) employed by learners of English as a foreign language (EFL). *English Language Teaching*, *12*(5), 177-189.

Gu, Y., & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning*, *46*(4), 643-679.

Hamza, F. S. A., Yasin, M. S. M., & Aladdin, A. (2017). The use and evaluation of vocabulary learning strategies among Sudanese EFL learners. *Arab World English Journal, 8*(3), 234-250.

Harmer, J. (2007). *The practice of English language teaching* (4th ed.). Harlow, England: Pearson Education Limited.

Laffey, D. (2016). An investigation of English idiom comprehension strategies used by university students in Korea. *Studies in English Education*, *21*(2), 61-84.

Laffey, D. (2017). *Exploring meaning-discovery strategy use: Single-word items vs. idioms.* Unpublished doctoral dissertation, Pukyong National University, Busan.

Laffey, D. (2019). Comparing the effects of freely available online dictionaries and printed glosses on vocabulary acquisition. *English Teaching*, *74*(2), 27-49.

Lee, E. (2009). Vocabulary learning strategies for Korean EFL learners. *Studies on English Language & Literature*, *35*(1), 323-340.

Lightbown, P. M., & Spada, N. (2006). *How languages are learned* (3rd ed.). Oxford, England: Oxford University Press.

Lin, J., & Lin, H. (2019). Mobile-assisted ESL/EFL vocabulary learning: A systematic review and meta-analysis. *Computer Assisted Language Learning*, *32*(8), 878-919.

Mokhtar, A. A., Rawian, R. M., Yahaya, M. F., Abdullah, A., & Mohamed, A. R. (2017). Vocabulary learning strategies of adult ESL learners. *The English Teacher*, *38*, 133-145.

Nyikos, M., & Fan, M. (2007). A review of vocabulary learning strategies: Focus on language proficiency and learner voice. In A. D. Cohen & E. Macaro (Eds.), *Language learner strategies*, (pp. 251-273). Oxford, England: Oxford University Press.

O'Malley, J., & Chamot, A. U. (1990). *Learning strategies in second language acquisition.* Cambridge, England: Cambridge University Press.

Oxford, R. L. (1990). *Language learner strategies: What every teacher should know.* Boston, MA: Newbury House.

Park, J. E. (2001). Korean EFL learners' vocabulary learning strategies. *English Teaching*, *56*(4), 3-30.

Rachmawati, D. L. (2018). Vocabulary learning strategies used by first year EFL students. *EnJourMe (English Journal of Merdeka): Culture, Language, and Teaching of English*, *2*(2), 1-6.

Schmitt, N. (1997). Vocabulary learning strategies. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition and pedagogy*, (pp. 199-227). Cambridge, England: Cambridge University Press.

Wu, W. S. (2005). Use and helpfulness rankings of vocabulary learning strategies employed by EFL learners in Taiwan. *Journal of Humanities and Social Sciences*, *1*(2), 7-13.

APPENDIX

Vocabulary Learning Strategy Use and Perceived Helpfulness Survey Data

Vocabulary Learning Strategy (Participants *N* = 135)	Use Mean	SD	% Change	Helpful Mean	SD	% Change
Meaning discovery strategies						
Analyze the part of speech	0.926	0.262	60.6	0.822	0.382	7.2
Analyze the root word and any affixes	0.770	0.420	62.0	0.770	0.420	8.0
Compare to a similar word in your native language	0.837	0.369	72.7	0.778	0.415	37.8
Compare to a similar known English word	0.933	0.249	NA	0.904	0.295	NA
Analyze any available pictures or gestures	0.770	0.420	30.0	0.763	0.420	-7.7
Guess from context clues	0.941	0.236	20.1	0.933	0.249	20.3
Use a bilingual dictionary	0.970	0.170	12.0	0.933	0.249	-1.7
Use a monolingual English dictionary	0.778	0.410	42.8	0.830	0.376	5.2
Use an electronic dictionary	0.852	0.355	NA	0.889	0.314	NA
Use a smartphone dictionary app	0.941	0.236	NA	0.904	0.295	NA
Use an online dictionary	0.978	0.147	NA	0.993	0.086	NA
Use an online translator	0.896	0.305	NA	0.763	0.425	NA
Use a word list to find the meaning	0.674	0.468	NA	0.711	0.449	NA
Use flash cards to find the meaning	0.304	0.459	NA	0.541	0.496	NA
Keep reading, hoping the meaning will become clear	0.881	0.323	NA	0.726	0.445	NA
Ask a teacher for a translation	0.615	0.486	16.5	0.719	0.449	10.9
Ask a teacher for a paraphrase or synonym	0.556	0.495	13.6	0.852	0.355	-0.8
Ask a teacher for an example sentence	0.541	0.497	30.1	0.800	0.400	2.0
Ask a classmate or friend the meaning	0.919	0.273	18.9	0.830	0.376	18.0
Discover the meaning through group work activity	0.548	0.495	19.8	0.659	0.471	0.9
Consolidation strategies						
Study and practice the meaning in a group	0.511	0.498	21.1	0.570	0.493	6.0
Ask a teacher to check flashcards or word list for accuracy	0.311	0.462	28.1	0.585	0.490	19.5
Interact with a native speaker	0.815	0.388	NA	0.926	0.262	NA
Study the word with a picture of the meaning	0.637	0.478	NA	0.756	0.425	NA
Imagine the word's meaning	0.896	0.305	39.6	0.941	0.236	56.1
Connect the word to a personal experience of yours	0.889	0.314	51.9	0.919	0.273	29.9
Associate the word with its coordinates	0.726	0.445	59.6	0.741	0.438	20.1
Connect the word to its synonyms and antonyms	0.904	0.295	49.4	0.911	0.284	3.1
Use semantic maps like word webs	0.319	0.465	22.9	0.526	0.497	5.6
Use "scales" for gradable adjectives	0.593	0.490	43.3	0.756	0.429	13.6
Use the Peg Method to remember words	0.185	0.388	NA	0.378	0.484	NA
Use the Loci Method to remember words	0.415	0.491	NA	0.563	0.495	NA
Group words together to study them	0.800	0.394	NA	0.852	0.348	NA
Group words together spatially on a page	0.622	0.484	NA	0.741	0.438	NA
Use new words in sentences	0.800	0.400	62.0	0.919	0.273	9.9
Group words together within a storyline	0.667	0.471	NA	0.793	0.405	NA

Study the spelling of the word	0.941	0.236	20.1	0.874	0.332	0.4
Study the sound of the word	0.948	0.222	34.8	0.919	0.273	10.9
Say the new word aloud when studying	0.911	0.273	22.1	0.919	0.262	0.9
Imagine the word form/spelling	0.844	0.362	52.4	0.844	0.362	62.4
Underline the initial letter of the new word	0.400	0.489	NA	0.415	0.491	NA
Study the configuration of the new word	0.785	0.410	NA	0.770	0.420	NA
Use the Keyword Method to remember words	0.889	0.314	75.9	0.896	0.305	58.6
Remember the affixes and roots	0.741	0.438	60.1	0.726	0.445	11.6
Remember the part of speech	0.852	0.355	55.2	0.778	0.415	4.8
Paraphrase the word's meaning	0.711	0.453	31.1	0.756	0.429	-1.4
Use cognates	0.807	0.394	70.7	0.822	0.382	48.2
Learn the words of an idiom or phrase together	0.807	0.394	32.7	0.844	0.362	7.4
Use physical action when learning words	0.556	0.495	42.6	0.711	0.449	22.1
Use semantic feature grids when studying	0.163	0.369	NA	0.326	0.468	NA
Use verbal repetition	0.933	0.249	17.3	0.956	0.206	11.6
Use written repetition	0.933	0.249	17.3	0.941	0.236	3.1
Use word lists	0.830	0.369	29.0	0.859	0.340	18.9
Use flash cards	0.430	0.494	18.0	0.600	0.487	-5.0
Take notes in class	0.963	0.189	32.3	0.933	0.249	9.3
Use the vocabulary section in your textbook	0.926	0.262	44.6	0.904	0.295	14.4
Listen to a recording of the word	0.778	0.415	NA	0.844	0.362	NA
Put English labels on physical objects	0.244	0.429	NA	0.600	0.487	NA
Keep a vocabulary notebook	0.933	0.249	NA	0.941	0.236	NA
Use English-language media	0.844	0.362	NA	0.911	0.284	NA
Test yourself with word tests	0.815	0.388	NA	0.896	0.305	NA
Use spaced word practice	0.859	0.348	NA	0.844	0.362	NA
Skip or pass the new word	0.504	0.498	9.4	0.289	0.453	12.9
Continue to study the word over time	0.881	0.323	43.1	0.904	0.295	3.4
Use a smartphone language learning app	0.689	0.462	NA	0.793	0.405	NA
Use an online language learning program	0.622	0.484	NA	0.793	0.405	NA