

The Pedagogical Implications of Multidimensional Vocabulary Acquisition through Deliberate Vocabulary List Learning

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Abstract

While numerous studies have been undertaken to develop learners' vocabulary growth in the past, the focus of the earlier work was predominantly on the breadth of vocabulary knowledge, especially on receptive vocabulary. Word knowledge has been often ignored as a multidimensional construct. The primary purpose of this study is to explore whether deliberate vocabulary list learning leads to multidimensional lexical growth. It also presents pedagogical implications on list learning in reference to Nation's (2008) four strands: meaning-focused input, meaning-focused output, language-focused learning, and fluency development.

1. Introduction

Currently, English courses offered at the university level in Japan are focused on communication skills and language use with mechanical vocabulary learning somewhat left behind. Recent studies (Okamoto, 2007) have shown that Japanese students' vocabulary knowledge is at its peak in the final year of high school and declines rapidly after entrance to university. Studies have also shown that there is a large gap between students' receptive and productive vocabulary knowledge (Okamoto, 2007; Yamamoto, 2011). Thus, the loss of students' receptive and productive vocabulary knowledge needs to be stemmed in the most effective and efficient way. In order to accomplish these goals, the breadth of vocabulary knowledge (i.e., vocabulary size or how many words learners know), and the depth of their vocabulary knowledge (i.e., what the learners know about the particular word) should be addressed simultaneously.

This study furthers the understanding of multiple aspects of vocabulary acquisition through receptive and productive vocabulary

learning. Vocabulary list learning may be defined as a primarily receptive vocabulary learning task, but the process of learning such a list and taking vocabulary quizzes may involve productive vocabulary learning as well. This study is expected to contribute to the understanding of a more holistic and comprehensive view of learners' lexical knowledge.

2. Literature Review

Most of the previous studies were based upon isolated learning conditions, such as receptive and/or productive learning, implicit or explicit learning, incidental or intentional learning environments, and how the learning condition was related to lexical acquisition (e.g., Webb, 2005; Mondria & Wiersma, 2004; Min, 2008; Joe, 1998).

2.1 Studies on Different Vocabulary Learning Conditions

Several experimental studies have been done to compare L2 receptive and productive vocabulary growth in learning contexts (e.g., Lee & Muncie, 2006; Min, 2008; Paribakht & Wesche, 1997). While some studies (Min, 2008; Paribakht & Wesche, 1997) have shown that the combination of receptive and productive vocabulary learning leads to greater gains in receptive and productive vocabulary knowledge, others studies (e.g., Mondria & Wiersma, 2004) have not supported such a finding. Other studies have shown that productive learning is superior to receptive learning to develop both receptive and productive lexical knowledge (Webb, 2005).

Furthermore, the majority of the research has focused on receptive vocabulary learning through reading tasks which have been shown to be not the most efficient way to gain a large amount of vocabulary items within a short period of time (e.g., Nation, 2001; Waring & Nation, 2004; Waring & Takaki, 2003). For instance, if learners read for an hour, they will learn only about 3 to 6 words incidentally (Waring & Nation, 2004). This means if students read 30 minutes a day during a 15-week semester, they will have read 52.5 hours by the end of the semester, and they will have enhanced their vocabulary by 157 to 315 words. Waring and Takaki (2003) examined

the rate at which learners learn and retain from reading graded readers. They found that after three months of treatment, nearly half of the words learned lost. The data suggests that limited new vocabulary was retained. Waring and Takaki (2003) also showed that learners need to encounter a word at least eight times in order to have a 50% chance of recognizing it after three months; words that were met fewer than five times had a 0% chance of being recognized. This indicates that there is a strong connection between exposure and vocabulary retention.

As outlined above, researchers are questioning the effectiveness of incidental vocabulary learning to gain large amounts of new vocabulary. Recent studies have reported that incidental vocabulary learning contexts will not produce large receptive vocabulary gains or long-term retention as had once been thought (e.g., Nation, 2001; Waring & Nation, 2004; Waring & Takaki, 2003). Then, what can we do to stop the loss of receptive and productive vocabulary knowledge in the most effective and efficient way, and even increase their vocabulary size and deepen their vocabulary knowledge?

Recent studies have shown that deliberate vocabulary learning is an effective way to increase learners' vocabulary level to the threshold for communication and even beyond (Elgort, 2011; Fitzpatrick, Al-Qarni, & Meara, 2008; Klapper, 2008; Milton, 2009; Nation, 2001). Deliberate vocabulary learning is a deliberate attempt to commit new words to memory in an intentional learning condition (Hulstijn, 2003). It is learning vocabulary directly out of context such as by using word cards or word lists.

2.2 Studies on Deliberate Vocabulary Learning

With the rise of communicative learning methodologies, deliberate word learning was once criticized, especially in the 1980s (Elgort, 2011). Some criticized it because it is rote learning and learning without context. One of the benefits of doing deliberate, intentional vocabulary learning such as through word lists is to gain a large amount of vocabulary words within a short period of time. One study showed that learning new vocabulary with word cards was 16

times faster than learning vocabulary incidentally by reading a story (Nozaki, 2007). To achieve word recognition, the participants could learn an average of 62.4 words per hour by using word cards. To achieve enough knowledge for translating vocabulary items, they learned an average of 56.0 words per hour.

In a case study conducted by Fitzpatrick, Al-Qarni and Meara (2008), a female learner was asked to learn 300 Arabic words (15 words per day) for 20 days, and she was able to make a dramatic vocabulary growth within a short period of time. Nation (1980) also reported that learners are able to learn between 30 and 100 new words per hour from bilingual word pairs.

Studies have shown that not only do the learners learn a large amount of vocabulary through deliberate learning, but retention rates under deliberate learning are also much higher compared with incidental learning conditions (Coxhead, 2006; Elgort, 2011; Nation, 2010). This makes sense that, as learners encounter target words such as by word lists or word cards more frequently than reading books, there is a better chance of retrieving more words which makes the learning of the word stronger. In addition, while learners engage with the words they are focusing on, they need to think about the target words deeply, and make the words stick in their minds (Coxhead, 2006).

As a result, deliberate learning results in implicit knowledge needed for language use and results in long-term retention (Nation, 2010). Deliberate learning condition creates “richer conceptual knowledge of the new L2 words and promotes integration of their meanings with existing semantic and conceptual representations” (Elgort, 2011, p. 34). Furthermore, since most of the vocabulary learning takes place outside of the classroom, deliberate learning is especially useful for independent learning in a condition where students are only in class for a limited amount of time (Klapper, 2008) such as EFL countries like Japan. When learners are in an environment where they receive minimal instruction, “self-tuition or self-direct learning are essential” (Leeke & Shaw, 2000, pp. 271-272).

The literature review has revealed the need for empirical

studies which address the following research question: To what extent will explicit vocabulary list learning lead to greater lexical gains in Japanese learners' breadth and depth of vocabulary knowledge?

3. Methods

3.1 Participants

The study involved 185 first-year students in an academic listening and reading CALL (Computer Assisted Language Learning) course from two intact co-educational classes of students with different majors (Intercultural Communication majors, $n = 80$; Economics majors, $n = 105$) at a high-tier, four-year private university in Tokyo, Japan. In other words, enrollment in these classes was controlled through the university's enrollment system, and therefore, the students did not constitute a random sample.

The International Communication students were selected as the AWL Group (the group of students who received vocabulary instruction in addition to the listening and reading instructions) because the majority of students were set to study abroad in English-speaking countries during the second semester of their second year with the aim of succeeding in an academic environment in which English is used as a medium of communication. Thus, academic words were considered essential for these students.

3.2 Lesson Procedures

Students were given the Academic Word List (Coxhead, 2000) in sections as homework and were asked to prepare for the in-class vocabulary quizzes. During the process of instructing students to learn vocabulary directly from the vocabulary list, an attempt was made to strengthen students' vocabulary knowledge by giving quizzes. By doing so, it was also expected to give the students an incentive to study the vocabulary list outside of class.

Researchers have emphasized the importance of practicing for tests. Announcing to students what is going to be tested would push them to practice repeatedly, which in turn would facilitate language performance leading to positive washback (Kawauchi, 2005; Saito,

2008, 2009). This is underscored on the basis of the practice effect hypothesis, stating that practice leads learners to perform better on tests than when they do not have a chance to practice (Saito, 2008, 2009). Furthermore, in order to prepare for the vocabulary quizzes, learners were encouraged to produce their lexical knowledge such as by spelling out the words and pronouncing the words out loud. As a result, it may lead learners to notice the gap between what they actually know and what they need to practice (Swain, 1995).

Through the process of preparing for the quiz and paying attention only to linguistic forms, students were in an intentional learning condition. In sum, learners were asked to produce the target items within a given context in the form of crossword puzzles or to find the word in word searches. The vocabulary quizzes tested different aspects of learners' receptive and productive knowledge: word meanings, grammatical forms, and spellings

3.3 Research Instruments

On the first day of class, all the participants' breadth and depth of their receptive and productive vocabulary knowledge were assessed by conducting the following research instruments:

1. The Vocabulary Levels Test (VLT; Schmitt, 2000; N. Schmitt, D. Schmitt, & Clapham, 2001; originally created by Nation, 1983, 1990), to establish learners' overall receptive vocabulary size.
2. The Productive Vocabulary Levels Test (PVLT; Laufer & Nation, 1999), to establish learners' overall controlled productive vocabulary size.
3. The Vocabulary Knowledge Scale (VKS; Paribakht & Wesche, 1993), to examine the participants' development of breadth and depth of vocabulary knowledge.

The same three vocabulary tests were conducted again at the end of the semester during class hours as part of their course work. The same procedure was used for both pre- and post-tests (Figure 1).

Pre-tests			LR Group No AWL or quizzes	Post-tests		
VLT	PVLT	VKS		VLT	PVLT	VKS
			AWL Group AWL & quizzes			

Figure 1. *The Administration Procedure for the Vocabulary Tests*

3.3.1 *The Vocabulary Levels Test (VLT)*

To examine the participants' breadth of vocabulary knowledge, two tests were employed. The first test was the Vocabulary Levels Test (VLT). This test was administered to measure students' receptive vocabulary size growth. It is divided into five levels: (a) the 2,000-word level (high-frequency words), (b) the 3,000-word level (low-frequency words), (c) the academic vocabulary level (high frequency for academic studies), (d) the 5,000-word level (low-frequency words), and (e) the 10,000-word level (low-frequency words). All the sections except for the 10,000-word level were used in the present study. Students got one point for each correct answer.

Each section is comprised of six words and three definitions. In each section, the test takers are asked to match the words on the left with the definitions given on the right, for example:

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- | | | | | | |
|-------------|-------|--|--|--|--------------------|
| 1. original | | | | | |
| 2. private | _ 1 _ | | | | first |
| 3. royal | _ 2 _ | | | | not public |
| 4. slow | _ 6 _ | | | | all added together |
| 5. sorry | | | | | |
| 6. total | | | | | |
-

3.3.2 *The Productive Vocabulary Levels Test (PVLT)*

The second test which was used to estimate the learners' productive vocabulary size growth was the Productive Vocabulary Levels Test (PVLT). Like the receptive VLT, this test is divided into

five levels, from the 2,000-word level up to the 10,000-word level. All the sections except for the 10,000-word level were used. As with the VLT, students got one point for each correct answer. Each section was comprised of 18 items.

An example item is given below. Notice that the first several letters of the target word were provided within a context and students were asked to complete the word:

I'm glad we had this opp_____ to talk.

[Answer: *opportunity*]

For the sake of simplicity in grading, a full mark was only given if a student had produced a semantically and syntactically correct answer; grammatical mistakes of singular and plural nouns were not marked as incorrect.

3.3.3 *The Vocabulary Knowledge Scale (VKS)*

To assess their depth of vocabulary knowledge, the Vocabulary Knowledge Scale (VKS) developed by Paribakht and Wesche (1993) was used. Two words were selected randomly from each of the 10 AWL sublists for a total of 20 items. The majority of the target words consisted of content words (11 verbs, 7 adjectives, and 1 noun) except for one function word (a preposition). Half of the vocabulary items (Target items 1 to 10) were not random and carefully selected to exclude words that were covered in the vocabulary quizzes done in class. The other half (Target items 11 to 20) included only the words which appeared in the quizzes during the class hours.

Students were given the 20 target items and the VKS (see Figure 2). The VKS measures the development of learners' receptive to productive vocabulary knowledge based on a 5-point self-report scale. The scale is categorized from I to V, a continuum from no knowledge of a word to full knowledge of a word.

The VKS covers a test taker's perceived, self-reported knowledge of a target item (Categories I and II) and actual,

demonstrated word knowledge (Categories III, IV and V). Category I means the test taker is completely unfamiliar with the target word. Category II shows he/she has a partial knowledge of the target word, which means the test taker recognizes the target word but does not know the meaning. Category III and Category IV indicate partial/full knowledge of the target word by providing the correct synonym or translation from L2 to L1. Category V shifts from the receptive to the productive dimension. This category means that the test taker has complete knowledge of the target word and is able to produce the target item in a sentence with grammatical and semantic accuracy.

Categories
I: I don't remember having seen this word before. この単語は見たことがない。
II: I have seen this word before but I don't know what it means. この単語を見たことはあるが、意味を知らない。
III: I have seen this word before and I <u>think</u> it means _____ (synonym or translation). この単語を見たことはある。多分... という意味だ。
IV: I <u>know</u> this word. It means _____ (synonym or translation). この単語を知っている。類似語は()、日本語で() という意味だ。
V: I can use this word in a sentence. e.g.,: _____ (Write a sentence). この単語を使って文を作ることができる。例えば・・・。

Figure 2. *The Vocabulary Knowledge Scale from Paribakht and Wesche (1997, p. 180)*

Students were directed to match each word from the vocabulary list to one of the five categories and to write as required for responses to categories III, IV, and V. Students were given a score equal to the category (see Figure 3). For example, if a learner selected III for a target word, and gave a correct answer, the score would be 3. However, if a learner selected III, but wrote an incorrect answer, the score would be 2.

Self-report categories	Scores	Meaning of scores
I	1	The word is not familiar at all.
II	2	The word is familiar but its meaning is not known.
III	3	A correct synonym or translation is given.
IV	4	The word is used with semantic appropriateness in a sentence.
V	5	The word is used with semantic appropriateness and grammatical accuracy in a sentence.

Figure 3. *The VKS Scoring Categories Employed by Paribakht and Wesche (1997, p. 181)*

3.4 Data Analyses

The data were analyzed using PASW version 18.0. Microsoft Excel 2007 was first used to enter and format the data files. The files were then transferred to SPSS for statistical analyses. Prior to the analyses, the VLT, the PVLt, and the VKS scores for pre- and post-tests were examined through various SPSS applications for accuracy of data entry, missing values, and fit of their distributions.

For the VKS, pre- and post-tests were scored separately by two raters: the researcher and an independent rater. The independent evaluator was a native speaker of English and who had prior experience with teaching EFL university learners. When scoring the test, neither the author nor the independent evaluator knew which participants had been assigned. Scoring discrepancies were discussed between the researcher and the independent evaluator until a consensus was reached.

Of 334 students (117 AWL Group; 217 LR Group) who registered for the course, 185 students (80 AWL Group; 105 LR Group) took all the VLT, PVLt, and VKS pre- and post-tests.

4. Results

To interpret the interaction, as a first step, three

repeated-measures *t*-tests (one test for each of the three vocabulary tests) were conducted each for the AWL and the LR Group (Table 1). A Bonferroni adjustment was made and the traditional *p* value of .05 was set to .0167 (.05 divided by 3, the VLT, PVL, and VKS tests) and the traditional *p* value of .01 was set to .0034 (.01 divided by 3) (Tabachnick & Fidell, 2001).

Table 1
Comparison of VLT, PVL, and VKS Test Scores (N = 185)

Group	Pre-test			Post-test			<i>k</i>	α	Difference	
	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>			Mean Diff.	<i>t</i> -value
AWL (<i>n</i> = 80)										
VLT	22.83	4.92	.55	25.74	3.51	.39	30	.84	2.91	7.36**
PVL	1.61	2.48	.28	5.34	2.05	.23	18	.79	3.73	13.01**
VKS	55.61	11.31	1.26	64.41	11.82	1.32	20	.91	8.80	9.95**
LR (<i>n</i> = 105)										
VLT	25.44	3.16	.31	26.07	3.05	.30	30	.83	.63	2.86*
PVL	4.98	2.22	.22	5.79	2.04	.20	18	.70	.81	4.46**
VKS	41.65	9.08	.89	41.98	10.62	1.04	20	.91	.33	.32

Note. *k* = number of items; α = Cronbach's alpha; **p* < .0167, two-tailed; ** *p* < .0034, two-tailed.

A comparison of the VLT tests indicated that both groups showed significant gains in vocabulary size (AWL Group, *t* (79) = 7.36, *p* < .0034, two-tailed, *d* = 0.82; LR Group, *t* (104) = 2.86, *p* < .0167, two-tailed, *d* = 0.28). Mean difference gains show that AWL Group (*MD* = 2.91) outperformed the LR Group (*MD* = .63).

Similar results were found for the PVL (productive vocabulary size). Analyzing these data using paired *t*-tests, significant gains were found for both groups (AWL Group, *t* (79) = 13.01, *p* < .0034, two-tailed, *d* = 1.46; LR Group, *t* (104) = 4.46, *p* < .0034, two-tailed, *d* = .44). While both groups showed a significant gain, the mean scores for the AWL Group nearly tripled after the fourteen-week treatment. The mean scores were 1.61 in the pre-test

and 5.34 in the post-test. Again, the mean difference indicates that AWL Group ($MD = 3.73$) gained more academic productive vocabulary size than the LR Group ($MD = .81$).

Analysis of the differences between the pre- and post- VKS tests showed an increase in the mean scores for both groups; however, gains were significant only in the AWL Group ($t(79) = 9.95$, $p < .0034$, two-tailed, $d = 1.11$). In other words, after one semester, while the AWL Group was able to improve their depth of vocabulary knowledge, the LR Group simply retained their lexical knowledge over time.

Further descriptive analyses were carried out on the distributions of the VKS pre- and post-test item scores. The mean VKS scores did not illustrate how the participants' lexical knowledge on the individual target items shifted from receptive to productive vocabulary knowledge, so I looked at the overall frequency of changes of the VKS scores by comparing the frequency of each score from 1 (unknown) to 5 (productive) in their pre- and post-tests.

As Figure 4 shows, the changes from pre-test to post-test of scores of 3 or higher in the AWL Group (48% to 64%) were larger than in the LR Group (41% to 38%). The LR Group even showed loss of vocabulary knowledge. In the AWL Group, students gained 6% of fully receptive vocabulary knowledge (Scores 3 & 4) and 10% of productive vocabulary knowledge (Score 5). On the other hand, in the LR Group, 4% attrition was observed in their receptive vocabulary knowledge (Scores 3 & 4), and there was only a 1% gain observed in their productive vocabulary knowledge (Score 5).

In other words, while the AWL Group showed remarkable gains in both their receptive as well as their productive vocabulary knowledge in their VKS frequency changes, receptive vocabulary loss was found in the LR Group. This trend was neither seen in their total VLT and PVLTL scores. Statistically, significant improvement was observed in both the LR Group's VLT and PVLTL scores. Also, the total VKS scores did not demonstrate the loss of participants' certain lexical knowledge and showed no significant changes. This is probably due to the nature of this VKS. Even if a student did not fully acquire the receptive vocabulary knowledge, shifting from Score 1

(not familiar) to Score 2(familiar but meaning is not known) still showed gains in their total scores.

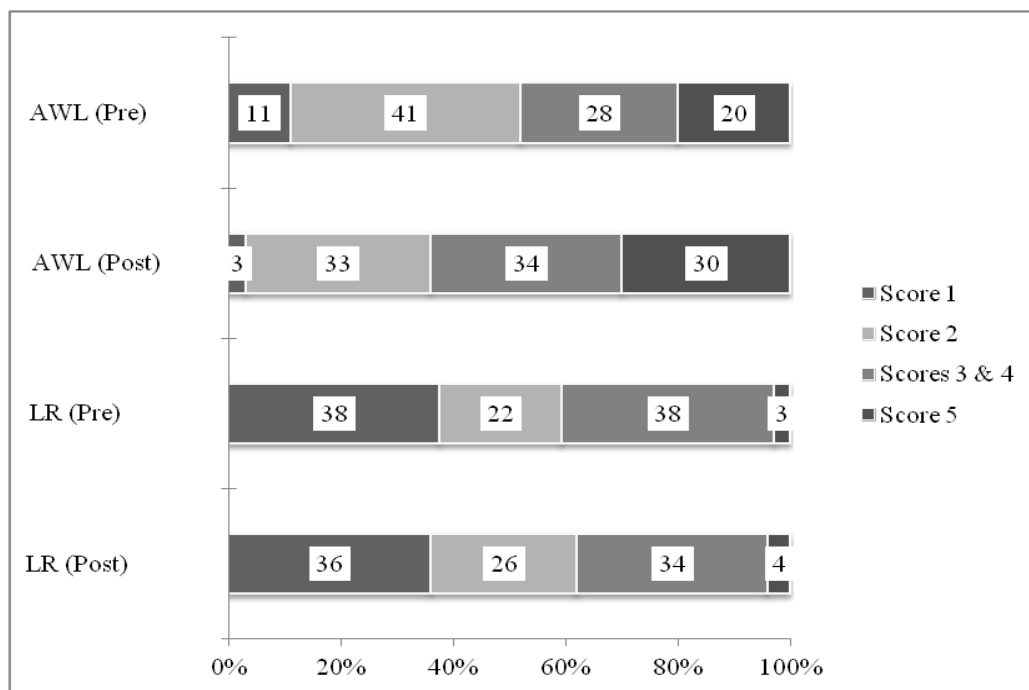


Figure 4. *VKS Score Frequency Changes in the AWL and LR Groups*

Note. Score 1 = not familiar; Score 2 = familiar but meaning is not known; Scores 3 & 4 = acquired receptive vocabulary knowledge; Score 5 = acquired receptive & productive vocabulary knowledge

5. Pedagogic Implications

Vocabulary list learning does indeed seem to be effective in retaining and increasing the breadth and depth of vocabulary knowledge. In terms of the breadth of vocabulary knowledge, through vocabulary list learning students were able to stop the vocabulary loss often ascribed to first-year university students while also making marked gains in receptive as well as productive vocabulary. Furthermore, students were able to deepen their vocabulary knowledge through simple list learning.

Criticism of learning words separately from context or discourse (e.g., Coxhead, 2006; Nozaki, 2007; Waring, 2010) and the

lack of exposure to targeted words in different contexts (Coxhead, 2006) are well founded. However, these criticisms are not insurmountable. One idea when designing a curriculum is to implement Nation's (2008) four strands: meaning-focused input, meaning- language-focused learning, focused output, and fluency development. Table 2 summarizes suggested activities for each strand and provides a proportion of time that could be spent on each of them in a reading course.

Table 2
Suggested Activities and Time Spent on Each Strand (from Nation, 2008) in Each Reading Class

Strand	Suggested Activities	Time
Meaning-focused Input	Narrow reading with 98% coverage	10~20 min.
Language-focused Learning	Learning AWL words Learning vocabulary strategies	10~20 min.
Meaning-focused Output	Writing response papers/Giving presentations	10~20 min.
Fluency Development	Repeated reading with 100% coverage	10~20 min.

5.1 Meaning-focused Input and Fluency Development

According to Nation (2008), in meaning-focused input, learners learn the target items and meet them in context such as through listening and reading with no more than one unknown word in every 50 running words; that is, student vocabulary knowledge equals 98% coverage of vocabulary.

As it has been widely acknowledged that lexical knowledge is closely tied with reading comprehension (Grabe & Stoller, 2001); implementing an extensive reading program is effective for both strands: meaning-focused input and fluency development.

Then, how do we select the reading materials? One way is to do narrow reading. Narrow reading is when learners engage in multiple authentic readings texts on the same theme. They should select academic topics that they are interested in following in order

to set up a research project to further investigate about the topic. The more the readers are familiar with the topic and the more they know about the subject area, the better their reading comprehension and vocabulary retention will be. The most important thing is that the learners have the opportunity to keep meeting the words they have met before.

Further training is done during fluency development as students become more proficient at using the target items by using familiar materials containing no unknown vocabulary. To draw learners' attention to academic words in a text, the target words can be highlighted by using bold, italics, underlining, boxing, or circling. For fluency development, the same materials can be used for repeated reading so that the learners are completely familiar with the topic and vocabulary words.

5.2 Language-focused Learning

Language-focused learning involves deliberate vocabulary learning and teaching vocabulary strategies. For instance, students can be trained how to use word lists and dictionaries and how to review systematically. One of the main roles of the teacher is to provide alternative vocabulary strategies and are especially important for EFL learners because most vocabulary learning takes place outside of classroom with students studying independently. With such strategy training, students can choose and select those which work best for them. Since lexical strategies are after all idiosyncratic behavior, it is necessary for learners to “self-regulate their learning” (Schmitt, 2010, p. 97) and to be proactive in finding ways that are effective for themselves.

5.3 Meaning-focused Output

It is important that learners will not only be able to use it receptively but also productively. Through meaning-focused output, learners deepen their lexical knowledge through producing vocabulary in speaking and writing (Nation, 2008). For instance, after students had enough exposure to meaningful input by doing narrow reading, productive vocabulary knowledge can be enhanced

by writing short book reports. To encourage them to use academic words, an important thing is to ask students to write about academic topics (Coxhead, 2006).

Also, encourage learners to include the target academic words they have encountered in their listening and reading. Another idea would be to put students into groups and ask them to present what has been read. The presentation could be a short summary of an article and a reaction to the content. For example, a presentation would be: retelling or summarizing the article in their own words; identifying the main ideas; giving solutions to a problem; or stating whether they agree or disagree with the writer's opinion.

6. Limitations and Suggestions for Future Research

With regard to the results of the study, a few limitations should be taken into consideration. With the limitations in mind, the suggestions for future research will be discussed.

First, the data was collected from a homogenous group. They were highly motivated, intermediate EFL learners in Japan, and this may have invalidated the test results. Future research needs to look at different and larger samples and to see which parts of vocabulary learning process are similar or different.

Second, this study did not incorporate a delayed post-test. After the semester ended, the participants studied abroad, and so it was not possible to conduct a delayed post-test. Thus, the current study only looked at the changes in receptive and productive vocabulary knowledge over one semester. First, it takes time for receptive vocabulary to become productive vocabulary, so gains in productive vocabulary are likely to occur over a longer period of training. Second, it is important to see how much vocabulary students can actually retain over time. The research could be conducted over a longer term to see how students' vocabulary knowledge changes over time.

Third, since most of the learners' had already mastered the 2,000-word level, it was assumed that by mastering the academic words, their four skills especially their listening and reading skills would also improve. Studies have shown that knowing the words on

the AWL provides about 8.5% to 10% coverage of the running words in most academic texts, and knowing both the General Service List (i.e., a wordlist composed of around 2,000 high frequency word families) and the AWL increases that coverage to about 90% (Coxhead, 2006; Coxhead & Nation, 2001; Nation, 2001, 2008). Yet, it is questionable whether the number is satisfactory enough to succeed in an academic environment in which English is used as a medium of communication. To get further valid and reliable results, it is important to not only assess learners' improvement on listening and reading comprehension, but also their actual performance (production) in context such as through speaking and writing.

7. Conclusions

While there has been a long debate over the effectiveness between implicit and explicit learning as well as intentional and incidental learning conditions, the advantage of doing explicit, intentional vocabulary list learning should not be viewed in terms of gaining only receptive vocabulary. Instead, the benefits of vocabulary-list learning are to gain not only receptive vocabulary knowledge, but also productive vocabulary knowledge as well as to increase learners' breadth and depth of vocabulary knowledge. Thus, in terms of practical pedagogy, it is important to consider the inclusion of vocabulary list learning in a well-balanced curriculum that intends to nurture the acquisition of lexical knowledge.

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