Korean L2 Learners' Vocabulary Gap between Receptive and Productive Knowledge and the Factors Affecting the Gap*

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Nam, Hyunjeong. Korean L2 Learner's Vocabulary Gap between Receptive and Productive Knowledge and the Factors Affecting the Gap. *The New Studies of English Language & Literature*   . The study aims to explore Korean L2 learners' gap between receptive and productive vocabulary knowledge and the factors affecting it. Taking an individual word-based approach, this research initially screened the participants out so that only the learners who perceived to 'know' all the target words were tested. A total of 90 out of 101 university students were tested with 96 questions (adopted from Nation 2001 and created based on Nation 2012). The results of an independent t-test suggest the imbalance of their vocabulary knowledge with smaller productive than receptive knowledge. The results of comparison between the words with production-based learning treatment and the ones without confirm the effectiveness of the production-based learning in order to narrow the receptive-productive gap. The results of Pearson product-moment correlation coefficient suggest that the learners with more experience in L2 production had narrower gap between receptive and productive knowledge. (Dong-A University)

Key Words: vocabulary, receptive knowledge, productive knowledge, Korean L2 learners, wash-back effect

Ⅰ. Introduction

Until 1960s, vocabulary had attracted less attention compared to grammar in research in language learning and teaching. However, after the publication of Richards's (1976) paper "The role of

vocabulary teaching", scholars and educators began to acknowledge the importance of vocabulary in language learning and teaching in the 1980s and 1990s (e.g., Carter 1987; Carter & McCarthy 1988; McCarthy 1984, 1990; Meara 1980; Nation 1982; Schmitt & McCarthy 1997). Since 2000, more rigorous research has been conducted (Nation 2001; Read 2000; Schmitt 2000) and the recent years have seen numerous attempts to find effective ways of teaching vocabulary (e.g., through storybook reading in Collins 2010; songs in Coyle & Gracia 2014; L2 listening in Van Zeeland & Schmitt 2013; mobile phones in Basoglu & Akdemir 2010).

Recent research concerning language learner's vocabulary knowledge has primarily focused on two areas; the size vs. depth of vocabulary development (Ishii & Schmitt 2009; Nation 2001; Read 2007; Webb 2008; Yanyan & Tongshun 2006) and the receptive vs. productive knowledge (Meara & Fitzpatrick 2000; Yamamoto 2011). However, even those studies aiming to assess the receptive or/and productive vocabulary knowledge seem to be in the frame of the vocabulary size or of language proficiency. Regrettably, little attention has been paid to the factors affecting the gap between the two dimensions. In addition, since learners on the same proficiency level may have different kind of knowledge for an individual word, more elaborated approach may be beneficial.

In particular, Korean L2 learners' vocabulary learning in secondary education tends to be aimed at test preparation for CSAT (College Scholastic Ability Test) and school exams, and even college students' vocabulary learning for TOEIC relies primarily on memorization of the L2-L1 translation equivalents. More importantly, the tests are designed to better reflect their receptive vocabulary knowledge, and thus the gap between their receptive and productive knowledge seems inevitable. One may consider these circumstances unavoidable in EFL context, and others may argue that efforts to

narrow the gap of receptive and productive knowledge have already attempted in a form of CLT (communicative language teaching). Accordingly previous research in Korea has conducted to provide better ways of teaching vocabulary for communication; however, the teaching methods seem hard to put into practice due to realistic classroom constraints. Thus, the present study aims to explore the receptive-productive knowledge gap and the factors affecting it so as to provide a practicable way to narrow the gap for the Korean L2 learners. In particular, the study has the goal of providing more feasible solutions applicable to ordinary English class with large class size and limited recourses in Korea.

Ⅱ. Literature Review

2.1 Vocabulary knowledge and vocabulary development

Unlike the common assumption that Korean L2 learners may have about English vocabulary acquisition, 'knowing an English word' does not simply mean 'knowing its Korean translation equivalent'. According to Richard (1976, 83) knowledge of 'a word' includes "the degree of probability of encountering that word", "the limitations imposed on the use of the word", "syntactic behaviour", "its underlying forms and derivations", "knowledge of the network of association", "its semantic value", and "the different meanings associated with the word" etc.

As an important dimension of vocabulary knowledge, an increasing attention has been paid to receptive and productive vocabulary knowledge in the last few decades. The recognition of word form, definition, and its synonym is often considered to be receptive vocabulary knowledge, while production of the word's form and

meaning is regarded as productive vocabulary knowledge (e.g., Nation 1990; Webb 2009). There has been an array of research findings showing some evidence of the positive effects of productive learning on the development of productive vocabulary knowledge. For example, Webb (2005) assessed sixty six Japanese university students' vocabulary knowledge in reading and writing tasks. The effect of productive learning over receptive learning on productive knowledge was found. In his subsequent study (Webb 2009), the effect was further confirmed. Sixty two Japanese university students were asked to provide the meaning of L2 words in L1 in the receptive task but L1 to L2 in the productive task. He found that the effect of receptive learning was limited to receptive knowledge but the effect of productive learning was present in the development of both receptive and productive knowledge. In another research project, Griffin and Harley (1996) divided English-speaking high school learners of French into two groups; one group for learning L1-L2 and the other group for learning L2-L1. They also found the positive effect of productive learning and further observed that the results were more promising when the type of learning was equivalent to the type of test. Despite the fact that productive learning is more demanding and requires more vigorous exertion than receptive learning (Waring 1997), a positive effect was found even from home assignments (Zhong 2011).

2.2 Vocabulary knowledge in connectionist models

It is worthy of attention that many researchers have utilized L2-L1 translation tasks to assess the receptive knowledge and L1-L2 translation tasks to evaluate the productive knowledge (e.g., Griffin & Harley 1996; Ryu 2012; Waring 1997; Webb 2005). However, it should be noted that lexical retrieval and processing in

L2 network and the translation at the L1-L2/L2-L1 lexical nodes take different paths. According to the Revised Hierarchical Model (Kroll & Stewart 1994), distinctive links exist in the bilingual lexicon; concept-L1, concept-L2 and L1-L2. As a learner's proficiency grows, the reliance on L1 decreases and the direct link between the concept and L2 becomes stronger. Thus, taken into consideration the difference between translation and L2 lexical access, the translation tasks may not fully reflect a learner's L2 vocabulary knowledge.

In this regard, the concept of network building in L2 in the connectionist models (Ellis & Humphreys 1999; Haastrup & Henriksen 2000; Levine 2000; Meara & Fitzpatrick 2000; Meara & Wolter 2004; Read 2004) may better explain L2 learners' vocabulary knowledge. These researchers suggest that in order for the vocabulary knowledge to have quality and depth, the associations between words should be developed and strengthened by learning. The network which is built in this way contains various information for language reception and production. Using this concept of network building, Meara (2009) suggests that a high level of vocabulary proficiency represents the densely organized network. In addition, Read (2004) asserts that network building represents the learner's depth of vocabulary knowledge. This is in concert with what Richard (1976) stated above that vocabulary knowledge entails in-depth information, and as connectionists suggest all the information is linked and stored in the network. Accordingly, L2 learners' vocabulary knowledge for language reception and production should not be limited to translation; therefore, any research to assess the knowledge needs to be conducted beyond the translation tasks.

2.3 Research regarding receptive and productive knowledge in

Korea

The studies directly concerning the gap between receptive and productive vocabulary knowledge in Korea are Kwon, Sunhee (2009) and Kim, Youngeun (2008). Kwon (2009) examined Korean L2 learners' receptive, controlled productive, and free productive vocabulary knowledge. It was found that the gap between receptive and controlled productive vocabulary knowledge was more evident for high frequency than low frequency words. Kim (2008) investigated Korean English learners' vocabulary knowledge in their reading comprehension. He found that the gap increased as the learners developed vocabulary proficiency. The results of the studies suggest that Korean L2 learners' vocabulary development tend to focus on quantitative growth rather than quality and depth (see also Park, Taehyon 2013). This leads us to question whether Korean L2 learners' vocabulary learning translates into the quality of knowledge for language production.

With regard to vocabulary learning, Ryu, Dohyung (2012) observed from interviews with Korean L2 learners that verbs are the most challenging word class in vocabulary learning. He further compared two conditions of productive vocabulary teaching; one focusing on verbs and the other without any particular focus. A positive effect of learning verbs on language production was found. Vocabulary knowledge of verbs in particular is of the first importance in language production since they carry not only semantic but also syntactic information essential for sentence structure. Therefore, vocabulary learning based on L2-L1 translation equivalents which is still prevalent among the Korean L2 learners fails to include the syntactic properties of verbs critical for production. This may further inhibit improvement of the quality of vocabulary knowledge.

In addition to vocabulary learning, vocabulary tests may also be problematic. Since vocabulary tests in Korea are still designed to assess receptive knowledge suitable for reading comprehension, Korean L2 learners' vocabulary learning is likely aimed at preparing for a particular test format. Ko, Myonghee's study (2014) examining the vocabulary test format and washback effect supports this speculation. The participants were informed that the test they were planning to take was either receptive or productive type. It was found that the learners' production was better when they studied for the productive test type. This finding should affirm a focus on the productive type as a goal for successful communication in the L2.

Although TOEIC scores have widely been deployed for assessing learners' English proficiency in research in Korea, it is questionable whether the test scores reflect a learner's genuine proficiency level, particularly for research concerning vocabulary knowledge. Shin, Changwon (2011) examined the relations between vocabulary knowledge focusing on semantic, morphological, and syntactic properties of verbs and TOEIC test scores. The results reveal that the most distinctive correlation of TOEIC scores was with syntactic knowledge. In Kwon, Sunhee's study (2009) no correlation of TOEIC scores was found with free productive vocabulary knowledge. Therefore, in order to investigate a learner's vocabulary knowledge in depth, an individual word-based approach may be beneficial. That is, even learners with the same proficiency test scores may have different vocabulary knowledge for individual words. As such, the present study took the individual word-based approach rather than general proficiency frame. The research questions are as follows:

1. Is there any difference between receptive and productive vocabulary knowledge of Korean L2 learners?
2. Does the production-based learning have an effect on narrowing

the gap between receptive and productive vocabulary knowledge?
3. Are there other factors that affect the gap between receptive and productive vocabulary knowledge?

Ⅲ. Method

3.1 Participants

A total of 101 university students participated in the study at the initial stage. They were freshmen majoring in English and were taking a basic English course. The course was provided in two sessions and the number of the students in each session was forty seven and forty three. There was no statistically significant difference of the students in the two sessions (session 1: M=71.15, SD=8.99; session 2: M=72.28, SD=10.83; $t(88)=-.54$, $p=.59$, two-tailed). The class met twice a week and lasted 75 minutes. Initially, they were presented with a list of target English words and asked to identify any word they did not know. Only 90 English learners who perceived to know all the words on the list were tested.

Although the current study took the individual word-based approach rather than general English proficiency, supplementary information about the participants was additionally collected. Their English proficiency (the mean of a practice test of TOEIC score was 585; English scores in College Scholastic Ability Test was 81.88) broadly placing their proficiency at an intermediate level.

3.2 Materials and procedure

Vocabulary knowledge tests in the study consisted of a total of 96 questions (48 receptive and 48 productive knowledge tests). One of the most frequently adopted test is Nation (2001); however, the number of questions available for receptive and productive knowledge test were limited and therefore more questions were added to obtain larger data. As shown in Table 1, each type of test included 24 questions (Vocabulary Levels Test and Productive Levels Test in Nation 2001) and additional 24 questions made from the BNC (British National Corpus) /COCA (Corpus of Contemporary American English) word family lists (Nation 2012)[1].

TABLE 1

Examples of test questions

		Receptive knowledge test	Productive knowledge test
Nation (2001)	1. copy 2. event 3. motor 4. pity 5. profit 6. tip	__ end or highest point __ this moves a car __ thing made to be like another	I'm glad we had this opp___ to talk.
Nation (2012)	1.Succeed 2.permit 3.solve	__ to allow something __ to find the answer	She shouldn't beh__ like that in public.

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1) The BNC /COCA word family lists are available at http://www.victoria.ac.nz/lals/about/staff/publications/paul-nation/headwords-second-thousand.pdf and http://www.victoria.ac.nz/lals/about/staff/publications/paul-nation/headwords-third-thousand.pdf. Sentences of the words on the lists were taken from major online dictionaries as follows: www.learnersdictionary.com; https://en.oxforddictionaries.com,http://dictionary.cambridge.org/dictionary/learner-english

4.withdraw	__ bad decision
5.regret	
6.scan	

The target words were chosen at the 2000 and 3000 word level with the same number respectively. In order to evade the methodological problem about translation-based tests, as discussed earlier, translation tasks were not added in the test. The reliability (Kuder-Richardson Formulus 20) of the vocabulary knowledge scales is .86 which indicates good internal consistency.

Since the study aims to explore the receptive-productive knowledge gap, it initially screened out the participants who did not present at least receptive knowledge so that only the participants who perceived to 'know' all the target words were tested in the study.

Then, in order to investigate the learning effect the participants' vocabulary learning of the 96 questions (48 receptive and 48 productive knowledge tests) was conducted in a different way. The study divided the target words into the one with production-based learning treatment (48 target words; 24 receptive and 24 productive tests from Nation 2012) and the other without the learning treatment (48 target words; 24 receptive and 24 productive tests from Nation 2001). For the treatment of production-based vocabulary learning, the participants were provided with various class activities promoting English production. For example, opportunities to tell the target word's meaning in English or to make sentences using the target words were given through both oral and written activities in class. In addition to the productive vocabulary teaching concerning the above-mentioned washback effect, class exams were also designed to promote their productive learning. The example question in their mid-term exam

was "Please make a sentence using the following words" (e.g., the target words: *remind*, *regret*, *self-employed* etc.).

Last, additional survey was provided after the tests to obtain the participants' background information about their vocabulary learning, dictionary use, and their experience in English production.

3.3 Data collection and analysis

First, the answers in each test were collected and organized using Microsoft Excel program and then the data were fed to the statistics program SPSS 24. Second, to compare the participants' receptive and productive vocabulary knowledge, an independent t-test was used. Third, the t-test was also conducted to compare the receptive-productive knowledge gap of the words with the treatment of production-based learning in class and the words without the treatment. Fourth, the relationships between the receptive-productive knowledge gap and other factors (the learner's vocabulary learning direction, dictionary use, and experience in L2 production) were investigated using Pearson product-moment correlation coefficient.

Ⅳ. Results

Descriptive analysis was examined first and then an independent *t*-test was conducted to compare the receptive and productive vocabulary knowledge. Next, the factors affecting the receptive and productive vocabulary gap were investigated using Pearson product-moment correlation coefficient.

Table 2 shows that the mean of receptive and productive

knowledge and the gap. Overall, scores of receptive knowledge were higher (M=40.27, SD=5.04) than productive knowledge (M=31.42, SD=5.45). Within the same type of vocabulary knowledge, the cases with learning treatment revealed the higher scores (M=21.31, SD=2.30) than without the treatment (M=18.96, SD=3.09 in receptive knowledge). The receptive-productive knowledge gap was narrower with learning treatment (M=0.19, SD=1.92) than without the treatment (M=8.70, SD=3.09).

TABLE 2
Descriptive statistics

N=90	R	RT	Rtotal	P	PT	Ptotal	Gap	GapT	Gaptotal
M	18.96	21.31	40.27	10.30	21.12	31.42	8.70	0.19	8.84
SD	3.09	2.30	5.04	3.70	2.38	5.45	3.09	1.92	3.58

Note. R: receptive knowledge without learning treatment, RT: receptive knowledge with learning treatment, R total: total receptive knowledge, P: productive knowledge without learning treatment, PT: productive knowledge with learning treatment, P total: total productive knowledge, G: receptive-productive knowledge gap without learning treatment, GT: receptive-productive knowledge gap with learning treatment, Gap total: total receptive-productive knowledge gap.

In Table 3, an independent t-test was conducted to compare the receptive vocabulary knowledge and the productive vocabulary knowledge. There was a significant difference in the receptive knowledge (M=40.27, SD=5.04) and for the productive knowledge [M=31.42, SD=5.45; $t(178)$=11.30, p=.00]. The magnitude of the differences in the means was large (eta squared[2]=.59).

2) Cohen's d .2=small effect, .5=medium effect, and .8=large effect

TABLE 3

Comparison between receptive and productive vocabulary knowledge

	N	Receptive		Productive		t	p	d
		M	SD	M	SD			
Vocabulary knowledge	90	40.27	5.04	31.42	5.45	11.30*	.00	.59

Note. SD=Standard deviation; *d*=Cohen's *d*
*p<.001

In Table 4, an independent-samples *t*-test was conducted to verify the effect of production-based vocabulary learning on the gap between receptive and productive vocabulary knowledge. There was a significant difference in the receptive-productive gap between the words without (M=8.70, SD=3.09) and for the words with the treatment of production-based vocabulary learning [M=0.19, SD=1.92; *t*(149)=22.08, *p*=.00]. The magnitude of the differences in the means was large (eta squared=.85).

TABLE 4

The effect of production-based vocabulary learning on the gap between receptive and productive vocabulary knowledge

	N	without		with treatment		t	p	d
		M	SD	M	SD			
Gap	90	8.70	3.09	0.19	1.92	22.08*	.00	.85

Note. SD=Standard deviation; *d*=Cohen's *d*
*p<.001

The participants were asked a question "How often do you speak or write in English?" in the survey. In Table 5, the

relationship between the learner's experience in L2 production and the gap between receptive and productive vocabulary knowledge was investigated using Pearson product-moment correlation coefficient. There was small negative correlation between the two variables, $r=-2.15$, $n=90$, $p<.001$, with high levels of the learner's experience in L2 production associated with the narrower gap between the learner's receptive and productive vocabulary knowledge.

TABLE 5

Correlation between experience in L2 production and the gap

	Experience in L2 production	Receptive-productive Gap
Pearson Correlation	1	-.215[*]
Sig. (2-tailed)		.041
N	90	90

** Correlation is significant at the 0.01 level (2-tailed).

As shown in Table 6, other factors that may affect the gap between receptive and productive vocabulary knowledge were the learner's vocabulary learning and the dictionary use either directed at language reception (L2-L1) or language production (L1-L2). There was a difference in the receptive-productive knowledge gap between the learners who had learned vocabulary for language production (M=8.83, SD=3.46) and the ones for language reception; however it was not statistically significant [M=9.21, SD=3.64; $t(88)=-.38$, $p=.71$]. In addition, there was a difference in the receptive-productive knowledge gap between the learners who had used dictionaries for language production

(M=8.77, SD=3.48) and the ones for language reception; however, it was not statistically significant [M=9.62, SD=3.48; $t(88)=-.82$, $p=.42$].

TABLE 6
Other factors affecting the receptive-productive knowledge gap

N=90		M	SD	t	p
Vocabulary Learning	Receptive (L2-L1)	9.21	3.64	-.38	.71
	Productive (L1-L2)	8.83	3.46		
Dictionary use	Receptive (L2-L1)	9.62	3.48	-.82	.42
	Productive (L1-L2)	8.77	3.48		

Ⅴ. Discussion

5.1. Korean L2 learners' receptive and productive knowledge

Receptive vocabulary knowledge entails the ability to recognize lexical items from a single word to collocations in a spoken or written form whereas productive knowledge refers to the ability to produce the words in a correct form appropriate to a given spoken or written context (Nation 2001). The current study saw a significant difference between Korean L2 learners' receptive knowledge (M=40.27, SD=5.04) and their productive knowledge [M=31.42, SD=5.45; $t(178)=11.30$, $p=.00$]. Their receptive knowledge was larger than productive knowledge. Their productive knowledge came to be approximately 78% of their receptive

knowledge. These findings are in line with overseas research suggesting a larger receptive knowledge than productive knowledge; eleven to twenty-seven percent higher in Laufer (1998) and twice larger in Clark (1993). Domestic research testing Korean L2 learners also revealed similar results. A larger receptive knowledge was found in Kim, Youngeun (2008) and it was further confirmed in formulaic lexical sequences in Kim, Jihyon (2013).

Makarchuk (2010) examined Korean L2 learners' vocabulary knowledge at a different frequency level. A larger receptive knowledge was confirmed at 2,000 and 3,000 levels, similar to the findings of the present study whereas the difference between receptive and production vocabulary knowledge was not statistically significant at the 1,000 frequency level. It is possible that because the 1,000 frequency level words tend to be less demanding in production than the seemingly difficult 2,000 and 3,000 levels words, the difference between receptive and production knowledge of the 1,000 frequency level words may not be distinctive. Due to the prototypical meaning and easier structures that the 1,000 frequency level words have, L2 learners may possibly be able to use the words in production without great endeavor. Contrary to the 1,000 level words, the 2,000 and 3,000 levels words may require more complex structures and thus tend to be more demanding in production. Given that Korean L2 learners' learning based on L2-L1 translation failed to involve the information critical for production, the gap between receptive and productive knowledge would be more noticeable. This speculation about learning as a possible reason for the gap will be discussed in the following section.

5.2 Factors affecting the receptive-productive knowledge

gap

The results of the present study indicate that there is a significant gap between Korean L2 learners' receptive and productive vocabulary knowledge (M=8.84, SD=3.58). In order to investigate the factors that may affect the gap, the study compared the words with and without the treatment of production-based vocabulary learning in class. In addition, the relations between the gap and other factors such as the learner's experience in L2 production, learning method, and dictionary use were considered in the study.

5.2.1 Production-based vocabulary learning

The study yielded evidence supporting the view that production-based vocabulary learning in class was an important factor affecting the receptive-productive gap. A significant difference in the gap was found between the words with (M=0.19, SD=1.92) and without the treatment of production-based learning [M=8.70, SD=3.09; t(149)=22.08, p=.00].

It can be assumed that the words without the treatment had not been successfully learned to promote L2 production in their secondary education. Kim, Jisun (2011, 246) supports this explanation, stating that Korean L2 learners' vocabulary learning does not involve language production such as sentence making. Lee and Kim (2005) also point out that Korean L2 learners' vocabulary learning focusing on memorization of word meanings does not successfully lead to the development of vocabulary proficiency.

Contrary to the words without the treatment, the words with the treatment in the study were learned beyond the memorization of L2-L1 translation equivalents. The importance of learners' output of target vocabulary for productive vocabulary competence as

suggested in Johnson (2004), the Korean L2 learners in the present study had opportunities to produce the target words through various class activities involving sentence-making. The effect of the production-based vocabulary learning found in the study is in line with Kim, Hyoungil (2008). From the comparison of sentence-building practice with rote-memorization, he found that the learner group with sentence-building practice with instructional feedback produced not only higher performance but also more complex sentence structures. Using Lexical Frequency Profile (LFP) Ryoo, Youngsook (2009) observed the limitation of receptive vocabulary practice on vocabulary development in English writing and also confirmed the effect of the productive vocabulary practice. Furthermore, the effect of output-based instruction was found not only in the immediate test but also in the delayed production tests in Kwon, Sunhee's study (2006).

5.2.2 Other factors

First, the study examined the relation between the Korean L2 learners' experience in English production and the receptive-productive vocabulary gap. Negative correlation (r=-2.15, n=90, p<.001) was found, indicating that the more experience in the L2 production the learners had, the narrower was the gap in their receptive-productive output.

Second, there was a difference in the receptive-productive gap between the vocabulary learning directed at language reception (M=8.83, SD=3.46) and the learning for language production; however it did not reach statistical significance [M=9.21, SD=3.64; t(88)=-.38, p=.71]. Seventy six out of ninety learners responded that they had learned vocabulary at an L2-L1 direction for language reception whereas only fourteen learners had learned vocabulary at an L1-L2 direction for language production. The

statistically insignificant results in the present study can be attributed to the Korean L2 learners' dominant learning for language reception as pointed out in other studies (e.g., Shin, Chon & Kim 2011).

Third, the relations between the receptive-productive gap and the learners' dictionary use either at an L1-L2 or L2-L1 direction were also examined. The L1-L2 dictionary use has also been considered to be productive use and the L2-L1 to be receptive use (Rundell 1999; Scholfield 1999). A difference in the receptive-productive gap was found between dictionary use for language reception (M=8.77, SD=3.48) and for language production; however, it was not statistically significant [M=9.62, SD=3.48; $t(88)$=-.82, p=.42]. Similar to the direction of learning above, the dictionary use predominantly directed at language reception (77 learners vs. 13 learners) may be the reason for the statistical insignificance. Han, Myungsoon's study (2008) supports this dominance of receptive dictionary use. She found that Korean L2 learners' experience was more prevalent in English reading than in English writing and thus the learners perceived L2-L1 translation as the most important function of dictionaries.

VI. Conclusion and Pedagogical Implications

In conclusion, the study confirmed the research questions as follows. First, Korean L2 learners' receptive and productive vocabulary knowledge were not balanced, as they had smaller productive than receptive knowledge. Second, the production-based learning in class was found to be effective for narrowing the gap between receptive and productive vocabulary knowledge. Third, there were other factors affecting the gap

between receptive and productive vocabulary knowledge. However, the statistically significant correlation with the gap was found only in the learner's experience in an L2 production. The learners with more experience in L2 production had narrower gap between receptive and productive knowledge. The other factors were the learners' vocabulary learning and dictionary use either at an L1-L2 (productive use) or L2-L1 (receptive use) direction. However, the results were not statistically significant due to the Korean L2 learners' dominant learning for language reception.

Based on the findings above, one can posit that although prevalent among Korean L2 learners, vocabulary learning should not be limited to translation tasks. The gap between Korean L2 learners' receptive and productive vocabulary knowledge can be narrowed by improving their productive knowledge. Therefore, as suggested in the results of the study, L2 learning should promote their productive knowledge. As Yamamoto (2011) suggested, reading classes that combine reading and writing activities to promote the productive vocabulary knowledge can be a good example to bridge the gap.

In addition, as found in Gravelle and Lee (2013), better performance can be expected when the test requires the same type of knowledge that the learners learn. Thus, not only the production-based vocabulary learning in class but also the production-based vocabulary test is essential for Korean L2 learners. This view is also supported from research by Jeon, Byoungman and Sohng, Haesung (2014). Their findings lend credence to the observations in this study that both teaching methods and assessment need to be changed to reflect the productive knowledge so as to promote a balanced language development.

Nevertheless, this study has some limitations. As Richard (1976)

defines, word knowledge entails so much information from semantic/syntactic properties to the network of association that one question per one target word may not be sufficient to reflect all the word knowledge. This issue may be taken into consideration in future research.

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