# The Effectiveness of Extensive Reading on EFL Learners' Vocabulary Learning: Incidental versus Intentional Learning 

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#### Abstract

Forty-six students majoring in business English volunteered to take part in an extensive reading program. The learners were divided into two groups: EG, the experimental group, received instruction in methods of extensive reading plus explicit output-pushed activities, and CG, the control group, received instruction in methods of extensive reading only. This study measured the effects of extensive reading on EFL vocabulary learning, through the effects of the two different instruction methods on learning receptive and productive vocabulary for the 46 learners of different vocabulary size. The research found that (a) both the two instructional methods resulted in significant gains in learners' receptive and productive vocabulary knowledge, but the combination of the incidental and intentional learning instruction yields greater vocabulary gains; (b) around $60 \%$ of receptive vocabulary is understood productively; and (c) students' vocabulary size plays a decisive role in acquiring the receptive and productive aspect of vocabulary knowledge.


Keywords: Incidental learning; Intentional learning; Receptive vocabulary; Productive vocabulary; Extensive reading.

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## 1. INTRODUCTION

It has been widely acknowledged that vocabulary is one of the most vital aspects of learning English as a foreign language (EFL), and extensive reading can lead to EFL vocabulary growth. People learn to read by reading, and the ability to read proficiently is best achieved through extensive reading (Day \& Bamford, 1998; Renandya, 2007). Likewise, there is widespread consensus that there is a correlation between vocabulary and extensive reading, for which vocabulary and reading comprehension can be regarded as a mutually beneficial process. This mutual benefit means that vocabulary facilitates learners' ability to decode meaning from the context (Beck, Perfetti, \& McKeown, 1982; Dole, Sloan, \& Trathen, 1995; McKeown, Beck, Omanson, \& Perfetti, 1983), and reading provides effects on learning vocabulary (Elley \& Mangubhai, 1981; Grabe \& Stoller, 2002; Krashen, 2004; Nation, 2009; Teng, 2015).

Learning vocabulary through reading is also defined as an incremental process. This means that the acquisition of vocabulary is incremental both in terms of acquiring an adequate vocabulary size, and in terms of mastering individual lexical items (Schmitt, 2010, p. 19). Similarly, Henriksen (2008) estimated the improvement in vocabulary size of Danish EFL learners by measuring their L2 and L1 size. In her research, although consistent improvement was found, given the prerequisite of an extended period of time, she demonstrated that the vocabulary learning process is incremental in nature. In other words, lexical items cannot be incidentally acquired from only a single exposure (Nation, 2001). Following this, additional research examined the dichotomous assumption of incidental or intentional learning, two major issues remaining to be solved in the research of vocabulary and extensive reading.

Incidental learning is not planned by either the instructor or the student but occurs as a 'by-product' of another activity; intentional learning is regarded as being deliberately intended by the teacher or the students (Nation, 1990). In terms of learning vocabulary, incidental learning requires learners to acquire vocabulary through reading, and, although some tasks or exercises might be imposed on them, the tasks or the exercises may not be directly related to learning vocabulary. In contrast, intentional learning requires learners to memorize the meaning of the target words via various conscious vocabulary-learning strategies.

Much research (e.g., Krashen, 1993; Laufer, 2009; Nagy, Herman, \& Anderson, 1985) has shown that the successful achievement of incidental vocabulary learning could manifest through extensive reading. However, some researchers (Nation, 2001; Van Zeeland \& Schmitt, 2012; Waring \& Nation, 2004) have questioned the effectiveness of extensive reading on incidental vocabulary learning. For instance, Waring and Nation (2004) argued that extensive reading could not provide enough opportunities to learn vocabulary proficiently within a restricted time. Instead, they proposed that explicit vocabulary learning, wherein attention is paid to linguistic forms, is more effective in learning vocabulary. Other researchers (Nation, 2001; Van Zeeland \& Schmitt, 2012) have also pointed out that successful guessing in context requires knowing $95 \%$ of the words. In some research,
although incidental vocabulary learning did occur, the effects were very small and cumulative. For example, Saragi, Nation and Meister (1978) argued that, for the words to be better engraved in learners' mind, at least ten instances of exposure to target words were necessary. Waring and Takaki (2003) proposed that almost one half of the vocabulary learned incidentally through reading was lost after three months, and the learners needed at least eight instances to achieve a $50 \%$ chance of recognizing a word after three months. Moreover, Teng (2014a) also proposed that ten instances were needed for EFL learners in China to master the form and meaning of target words incidentally. Hence, the extant research questions the effectiveness of extensive reading on incidental learning for L2 or EFL learners. However, this research shares a common point in that learners could deepen the understanding of previously encountered words, thus making it easier to master the words when they have more exposure to the words through extensive reading. Therefore, according to the mentioned research, learning from extensive reading is worthwhile. Indeed, as stated in Nation (2008), extensive reading is, by far, one of the most essential vocabulary learning strategies and an indispensable part of any vocabulary learning program. In addition to this, the research on incidental learning sheds light on understanding the process of acquiring words.

However, focusing solely on incidental vocabulary learning is not sufficient (Nation, 2001). Consequently, some researchers (e.g., Pellicer-Sanchez \& Schmitt, 2010; Pigada \& Schmitt, 2006) have recommended a learning method that combines intentional and incidental learning, arguing that, although extensive reading does contribute to the incidental learning of vocabulary, a supplementary regime with explicit vocabulary-enhancing exercises yields more vocabulary gains. The current study, with an aim to measure the growth of vocabulary knowledge for EFL learners through extensive reading, employs two different groups: a control group (CG) receiving instruction in extensive reading only, and an experimental group (EG) using a combined method of incidental learning and intentional learning; e.g., they received extensive reading plus pushed-output activities of learning vocabulary.

Some researchers (e.g., Nation, 2001, 2009; Waring \& Takaki, 2003) have observed that reading could enable learners improve their receptive and productive vocabulary. However, such research has mainly concentrated on the outcome of receptive vocabulary through reading while the research on productive vocabulary achievement remains limited. According to Laufer (1998), vocabulary knowledge consists of receptive knowledge, controlled productive knowledge, and free productive knowledge. Therefore, the purpose of the current study is to measure possible improvement both in receptive and in productive vocabulary learning as a result of different vocabulary instructional techniques through extensive reading.

With the articles reviewed above, three research questions were addressed in the current study:

1. Which instructional technique results in more receptive and productive vocabulary knowledge: incidental learning or a combination method?
2. To what degree do the read-only and read-plus modes facilitate acquisition of receptive and productive vocabulary knowledge after the program?
3. Is learners' vocabulary size a predictor of receptive and productive gains?

## 2. THE STUDY

### 2.1. Participants

Forty-six first-year students, majoring in business English, volunteered to participate in this study, hoping to improve their proficiency level. The participants ranged from, 18-20 years of age. The learners were required to take Nation and Beglar's (2007) vocabulary size test (VST) before the study. The reliability of this test was validated in Beglar's (2010) study, and much positive information about this test has been presented in Schmitt (2010) and Lessard-Clouston (2013). This test measures a learner's vocabulary size from the first 1,000 to the fourteenth 1,000 word families. There are totally 140 multiple-choice items, with 10 items from each 1,000 word family level. A sample test item of the first 1,000 can be seen below:

SEE: They saw it
a. cut | b. waited for | c. looked at \| d. started

The $c$ option has a similar meaning as saw. The learner will achieve one point for choosing the correct item. A test-taker's total score needs to be multiplied by 100 to get his/her total receptive vocabulary size. The results of the test are shown in Table 1.

Table 1: Results of VST

|  | Lower than <br> 10 | $\mathbf{1 0 - 1 9}$ | $\mathbf{2 0 - 2 9}$ | $30-39$ | Above <br> 40 | M | S.D. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number | 0 | 20 | 22 | 4 | 0 | 21.36 | 6.59 |

According to Table 1, the mean score was 21.36, which indicated that the participants' overall English proficiency was lower-intermediate. In this study, the control group consisted of 23 students, with 10 students from the 10-19 vocabulary level, 11 from the 20-29 vocabulary level, and 2 from the 30-39 vocabulary level. The experimental group receiving reading plus productive activities of learning vocabulary also consisted of 23 students: 10 students from the 10-19 word level, 11 from the 20-29 word level, and 2 from the 30-39 word level. Each group included the same number of students at almost the same word level before the study, and the students were not informed of the real purpose of the study.

### 2.2. Materials

As mentioned above, the participants' overall English proficiency was lowerintermediate, and it is often claimed (e.g., Nation, 2001, 2009; Waring \& Takaki, 2003) that graded readers are useful reading materials for students with a lower-intermediate level to improve receptive as well as productive vocabulary. Therefore, graded readers including A Tale of Two Cities, Great Expectations, Wuthering Heights, Jane Eyre, and David Copperfield were selected from the Bookworm series published by Oxford University Press. These famous stories remain popular with adult readers as well as with children.

Hence, these books were assumed to maintain the participants' interest in this extensive reading program. As these books are mostly written with 1,000 high frequency words, participants will not find reading the books difficult.

### 2.3. Target items

All the test items were confirmed to have appeared in the five books for 8-10 times by using frequency software on the Compleat Lexical Tutor website (Cobb n.d.). According to research findings (Teng, 2014a; Waring \& Takaki, 2003), learners are assumed to have incidentally mastered the 30 words with a frequency level of 8-10 times after reading the five books. The 30 words were substituted with non-words which were created with the online ARC Non-word Database (Rastle et al., 2002). Details are shown in Table 2.

Table 2: Details of the 30 Target Items

|  | Original word | Substituted word |
| :---: | :---: | :---: |
| 30 test items | mad | plage |
|  | notice | loax |
|  | imagine | bellen |
|  | realize | bicky |
|  | governess | staice |
|  | moor | buttor |
|  | Punish | prait |
|  | forgive | loove |
|  | delighted | taddy |
|  | servant | voundy |
|  | domestic | voet |
|  | cruel | zock |
|  | revenge | vedge |
|  | miserable | zob |
|  | whisper | pitful |
|  | sobbing | drack |
|  | adopt | gelm |
|  | jealous | welch |
|  | creditor | zie |
|  | forge | pirre |
|  | prisoner | gotty |
|  | accuse | powed |
|  | inherit | padle |
|  | convict | booer |
|  | revolution | dolk |
|  | trembling | piede |
|  | tribunal | emddy |
|  | frightened | pobful |
|  | emigrant | poot |
|  | innocent | porbem |

Following this method, it is ensured that the participants do not know the target words in advance.

### 2.4. The Two Experimental Modes

The participants in the control group received extensive reading only. They were required to finish reading the five short books within one month. The nonwords were placed into the books naturally, and meanings were provided. For example:

He seemed plage to me, Ellen. I left him, and went to find the old servant, Joseph. It seemed that Heathcliff's room was locked, and there were no guest bedrooms,

Plage: crazy, mad so in the end I slept on a chair in the child's room. What a welcome to my new home.

The participants in the experimental group received extensive reading of the five books as participants in the control group did. In addition, they also received some explicit vocabulary exercises. For example, the teacher provided some examples on how to use the target words and after interactive exchanges between teachers and students, the participants were then required to create a sentence (on any theme) by using the target words.

During the reading process, the participants were told to read naturally as they usually did. They were not informed of the two tests, which were administered immediately after reading all the five books. This was to ensure learners would not intentionally memorize the target words.

### 2.5. Measures

Receptive vocabulary test. The receptive vocabulary test in this study is a multiple-choice test, with 30 items. Each of the target items consisted of a stem, a key, three distracters written with simple words, and an I don't know option. An example can be found below:

## Plage

A. happy I
B. crazy | C. angry
D. excited । E. I don't know

Simple words are used as the key and the distracters, because using difficult words might be unscientific and compromise the results of the study.

Productive vocabulary test. The productive vocabulary test in this study is an active recall test, also with 30 items Students were required to write the target word according to one given context. An example is as follows:

Somebody who is mad means $\mathrm{s} / \mathrm{h}$ is $\qquad$

The order of taking the two tests was first productive vocabulary test, followed by receptive vocabulary test (see more examples in the appendix). This was to avoid the possible hints derived from the receptive vocabulary
test. Moreover, to avoid wild guesses, participants were encouraged to choose the 'I don't know' option if they do not know. The time for completing the two tests was 30 minutes.

### 2.6 Scoring System

The author scored the tests. The receptive vocabulary test was scored dichotomously with one point for choosing the correct option and zero points for choosing the incorrect option. The total score for this test is 30 points.

The productive vocabulary test was scored based on the correct spelling of the target words. Students who can write a correct target word would achieve one point. Any incorrect spelling would not be credited. The total score for this test is also 30 points.

### 2.7. Procedures

Both groups were required to take the receptive and productive vocabulary tests after the reading program. The experiment was conducted in the extensive reading course, which was four hours a week according to the syllabus. The study lasted for 4 weeks.

The difference lay in the instructional technique that each group received. The students in the control group (also called read-only group) were required to read the five books, per incidental learning, because the learning of vocabulary is a 'by-product' of reading. In contrast, students in the experimental group (also called read-plus group) were required to finish vocabulary-enhancement activities after reading the five books, as the focus of learning is on both the reading and vocabulary. Vocabulary-enhancement activities included practicing the examples of target word usage provided by the teachers, as well as interactive exchanges between teachers and students on how to use the words and students' attempt to create an original sentence with using the target word. However, the participants were not informed that two tests would be administered after the reading program, because this would make the students intentionally prepare for the tests. This would make the results unscientific.

## 3. FINDINGS

All the data were analyzed based on the following questions by using SPSS software (version 19.0).

Table 3 presents the total learning gained from read-only and read-plus mode.

Table 3: Descriptive Results after the Two Learning Modes

| Condition | Types of knowledge |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Receptive knowledge |  | Productive knowledge |  |  |  |
|  | M | SD | $\%$ | M | SD | $\%$ |
| Read-only | 17.20 | 2.87 | 57.3 | 10.80 | 2.91 | 36.0 |
| Read-plus | 25.10 | 2.21 | 83.6 | 16.15 | 2.19 | 53.8 |

According to Table 3, the students in the read-only condition gained very little productive knowledge (36.0\%), although they were able to recognize the meaning of more than one half of the target words. In contrast, the students in the read-plus condition showed better results in both tests, with a relatively satisfied receptive knowledge result (83.6\%) and a modest result in productive knowledge (53.8\%).

Wilcoxon signed-rank tests were then applied. The results showed that the advantage of read-plus condition over the read-only was statistically significant for the two types of vocabulary knowledge (receptive knowledge: $Z=-3.95, P<0.001$; productive knowledge: $\mathrm{Z}=-4.97, P<0.001$ ).

On the basis of the findings, with regard to the first research question of which instructional technique results in more word knowledge learning, the answer is clear. Although the uninstructed, incidental learning mode could result in vocabulary knowledge gains, the results were relatively modest. However, adding explicit instruction on the basis of reading yielded greater learning. From eight to ten reading exposures of the target words (mentioned above) with direct instruction on vocabulary use, the students were able to recognize the meaning of $83.6 \%$ of the target items and produce the word form of more than one half of the items. This further strengthens the previous research findings for the value of explicit vocabulary instruction (Schmitt, 2008; Sonbul \& Schmitt, 2010). Thus it is concluded that adding explicit vocabulary instruction after extensive reading is worthwhile in the EFL reading class, as it facilitates learners in building a repertoire of word knowledge.

The second research question explores to what extent the two instructional conditions improved the learning of the two types of word knowledge. Results from Table 3 showed that, under both learning conditions, receptive word knowledge was the one that was better learnt, followed by the productive word knowledge.

Repeated Wilcoxon signed-rank tests were then applied. The comparisons between the two types of word knowledge were significant at the $p<.05$ level. This is in line with previous studies on ease-of-learning ranking of receptive and productive knowledge (Laufer, 2005; Schmitt, 2010). This can be summarized as follows:

$$
\begin{array}{ll}
\text { Read-only: } & \text { Receptive knowledge>productive knowledge } \\
\text { Read-plus: } & \text { Receptive knowledge>productive knowledge } \\
& \text { (>means 'more substantial learning than') }
\end{array}
$$

Thus it is concluded that receptive word knowledge is easier to acquire than productive word knowledge. As the minimal exposures are eight to ten times, however, it only resulted in mastery of one third of productive knowledge. Adding explicit vocabulary instruction can yield more than one half of productive knowledge. This highlights the importance of combining repetition and direct vocabulary instruction in vocabulary acquisition through extensive reading. Moreover, the results also highlight the importance of teaching productive word knowledge. While many teachers focus on teaching word meanings, in many cases, it may be the productive word form which is the most difficult dimension to learn.

The third research question explores whether learners' vocabulary size is a predictor in receptive and productive gains.

Table 4 represents the descriptive and ANOVA analysis results of receptive knowledge learning for the three groups of learners with different word level.

Table 4: ANOVA Analysis of Receptive Vocabulary Gains After the Study

| Groups | Word level | $\mathbf{M}$ | S.D. | F |
| :---: | :---: | :---: | :---: | :---: |

As shown in Table 4, from F=71.01 and 79.20 ( $p<0.05$ ), there is a significant difference in comparing the improved mean score of the students with different word levels in each group. Hence, the conclusion can be drawn that students in different word levels have improved their receptive vocabulary through extensive reading.

A post-hoc analysis revealed that learning results yielded by students of 3,000-3,900 word level was significantly better than that achieved by students of 2,000-2,900 word level ( $P<0.05$ ). Likewise, students of 2,000-2,900 word level yielded better results than students of 1,000-1,900 word level ( $P<0.05$ ). This is evidence that the students with a higher word level find it easier to achieve higher gains in word learning. In other words, vocabulary size is a predictor of receptive vocabulary gain.

Table 5: ANOVA Analysis of Productive Vocabulary Gains After the Study
$\left.\begin{array}{ccc|c|c}\hline \text { Groups } & \text { Word level } & \mathbf{M} & \text { S.D. } & \text { F }\end{array}\right]$ P

As shown in Table 5, from $\mathrm{F}=95.18$ and 40.08 ( $p<0.05$ ), there is also a significant difference in comparing the improved mean score of the students with different word levels in each group. Consequently, students in different word levels appear to have improved their productive vocabulary respectively through extensive readiang.

A post-hoc analysis showed that students of 3,000-3,900 word level produced better learning of productive vocabulary knowledge than students of 2,000-2,900 word level ( $P<0.05$ ). Likewise, students of 2,000-2,900 word level yielded better results than students of 1,000-1,900 word level ( $P<0.05$ ). This suggests that students with a higher word level are more prone to achieve better results. Therefore, vocabulary size is also a predictor in productive vocabulary gain.

The next step is to understand to what extent the receptive vocabulary is known productively. The results are shown in Table 6.

Table 6: The Percentage of Receptive Vocabulary that Are Known Productively

| Groups | Word level | $\%$ |
| :---: | :---: | :---: |
| CG | $10-19$ level | 50.8 |
|  | $20-29$ level | 63.4 |
| EG | $30-39$ level | 68.0 |
|  | $10-19$ level | 69.8 |
|  | $20-29$ level | 61.5 |
|  | $30-39$ level | 63.3 |

As shown in Table 6, the difference between receptive and productive vocabulary gain is significant for both two groups, as well as learners of different word levels. It is estimated that around $60 \%$ of receptive vocabulary are known productively.

## 4. DISCUSSION

### 4.1. Incidental Learning

Vocabulary acquisition cannot occur unless the learners understand the receptive form and the meaning as well as establish a form-meaning link in their minds (Nation, 2001). In the present study, through extensive reading, learners were exposed to the word form and meaning of the target words for eight to ten times, effecting the elaborate processing of the words; thus, receptive and productive vocabulary knowledge improved as shown in Tables 4 and 5. However, leaving EFL students to learn vocabulary in a context of extensive reading only seem to get them modest learning gains. In other words, the words that the learners can incidentally acquire are fewer than the words that the learners who had done the explicit vocabulary activities acquire. As the learners manipulated the words and understood the collocation of the words with other words, they were engaging in explicit vocabulary-enhancing activities. When the word associations are reinforced, a more engraved mapping of form and meaning might occur and support them to acquire a deeper level of target word knowledge. As shown in previous studies, adding explicit vocabulary learning could make the words more salient, and form a deeper level of semantic processing (Craik \& Lockhart, 1972; Sonbul \& Schmitt, 2010). This finding reinforces the studies by Waring and Takaki (2003), Pellicer-Sanchez and Schmitt (2010), and Pigada and Schmitt (2006), which had advocated a supplement of explicit learning to implicit learning.

### 4.2. Receptive and Productive Vocabulary Mastery

Receptive and productive vocabulary learning are interrelated, albeit separable, issues. As shown in Tables 4 and 5, learners understood some lexical items through extensive reading, but they were not able to produce
all those items. In other words, learners can recognize more receptive knowledge than productive knowledge, which is in line with Schmitt (2010). The difference between receptive and productive vocabulary gain is also significant, and it is estimated that less than $70 \%$ of receptive vocabulary is developed productively (Table 6). Previous studies (e.g., Laufer, 2005) have suggested that there is major gap between receptive and productive vocabulary knowledge (e.g., only $16 \%$ of receptive vocabulary was known productively at the 5,000 frequency level, and $35 \%$ at the 2,000 frequency level), the present study showed a better result. However, the results were not as satisfied as Melka's (1997) findings, which suggested that $92 \%$ of receptive vocabulary is developed productively. The inconsistency of these figures might be explained via the difference of measurement issues, as receptive and productive vocabulary results are inextricably related to the types of the tests used. However, one guaranteed point is that learners gradually shift their receptive mastery towards productive vocabulary as more is learned about the words, and this is ensured by combining explicit vocabulary learning and word exposure frequency.

### 4.3. Vocabulary Acquisition for Learners with Different Word Level

The results showed that both the incidental method and the combination of incidental and intentional methods affect both learning receptive and productive vocabulary (Tables 4 and 5). However, vocabulary size is a key determent in both receptive and productive vocabulary gains. In other words, students with a higher word level did much better both in receptive and in productive vocabulary learning than those with a lower word level. This is disappointing in the context of teaching English as a foreign language, because, when an extensive reading program was arranged, it was expected that both learners with a large vocabulary and small vocabulary would benefit from reading. However, in some teaching, e.g., in this study, although learners with a small vocabulary size improved in both receptive and productive vocabulary, learners with a larger vocabulary size improved even more. This might be explained in that learners with a larger vocabulary were more fluent in extensive reading than learners with a smaller vocabulary. In addition, such learners might be keen to use a variety of strategies to probe more into the collocational and grammatical usage of the words, and they might be more willing to explore the semantic relationships between new words and already-known words. In contrast, the students more dependent on a teacher's help might continue to expect help from a teacher in telling them how to produce a context rather than trying to produce a context by themselves.

## 5. CONCLUSION

Based on the data analysis and discussion above, given the same amount of time devoted to the two groups, incidental learning appears to produce modest results in both receptive and productive gains, while the experimental group supplemented with explicit vocabulary-enhancing activities leads to the
acquisition of even greater numbers of words in both receptive and productive vocabulary knowledge. This suggests that more focused explicit instruction is needed for EFL students who lack comprehensible language input.

However, the percentage that receptive vocabulary is understood productively is relatively small, which shows that the process from receptive vocabulary mastery to productive vocabulary mastery is a multi-faceted and complex one. Accordingly, the understanding of receptive vocabulary does not guarantee a successful production of contexts given the target words. Hence, related explicit exercises on productive vocabulary knowledge are suggested in the present study.

In addition, students' vocabulary size plays a decisive role in acquiring both the receptive and the productive aspect of vocabulary knowledge. A successful program of extensive reading should facilitate learners' capacity both in terms of those with a large vocabulary and those with a small vocabulary. This study suggests that more efforts are needed to engage learners with a small vocabulary in extensive reading.

There were several limitations in this study. First, there are only 30 test items; if more target words were involved, the results would be more reliable. Second, since the study is purely statistical. Interviewing students to find out how the two different methods of learning affect their vocabulary acquisition would make this study more inclusive. Third, it should be mentioned that some of the non-words were built with suffixes that occur in everyday English, and some of the non-words (e.g. pitful) resembled real words in the English language (e.g. pitiful). These facts may have affected the participants' learning of vocabulary. Future studies on using real English words would cover this disadvantage. Finally, as mentioned above, the control group received extensive reading only (incidental learning). However, students were provided with the definition of the non-words throughout the reading activity. This was defined as less explicit than the method used with the participants in the experimental group. Adding another incidental activity without provision of definitions to see whether students could extract the meaning of the words through the context would make this study more inclusive. This is an interesting topic for a future study, which should investigate learning in these three modes.

Likewise, while the dichotomy between receptive and productive vocabulary has received ecological validity, the correlation between the two issues remains unclear (Schmitt, 2010). Hence, future studies should focus on the inconsistencies regarding how many receptive words are known productively. In addition, research on how to improve learners with a low word level in both receptive and productive vocabulary learning through extensive reading is sorely needed (Teng, 2014b).

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## APPENDIX

## EXAMPLES OF MEASUREMENT TESTS (5 items out 30)

## - Receptive vocabulary test

Direction: In this test, there are 30 test items, each item includes a key answer with the same meaning, three distracters, and an I don't know option. Example:

Fierce
A. Happy
| B. excited |
C. angry
D. watch out |
E. I don't know

The key is $C$, you will get one point for choosing $C$. Now, please get ready.

1. plage
A. happy
B. crazy
C. angry
D. excited
E. I don't know
2. loax
A. attention
B. care
C. sadness
D. happiness
E. I don't know
3. bellen
A. like
B. hate
C. suppose
D. walk
E. I don't know
4. bicky
A. read I
B. bring
C.borrow
D. understand
E. I don't know
5. staice
A. grandma
B. instructress
C. shopkeeper
D. brother
E. I don't know

## - Productive vocabulary test

Direction: Please try to write down the target words according to the given context.

1. Somebody who is mad means $s / h$ is $\qquad$ .
2. If you bring something to someone's $\qquad$ , you make them aware of it.
3. If you $\qquad$ something, you think about it and your mind forms a picture or idea of it.
4. If you $\qquad$ that something is true, you become aware of that fact or under-stand it.
5. A $\qquad$ is a woman who is employed by a family to live with them and educate their children.

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