# Identifying and activating receptive vocabulary by an online vocabulary survey and an online writing task

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**Abstract**. Seeking to identify and activate the Receptive Vocabulary (RV) of English Language Learners (ELLs), we designed (1) an online five category multiple-choice vocabulary survey that more quickly measures vocabulary knowledge, and (2) an online creative writing task where ELLs chose RV items identified in step (1). While RV items of highly proficient ELLs cause difficulties in language production, writing tasks promote active vocabulary use and knowledge (Laufer, 2013). We designed a four stage, five week writing task based on task-induced involvement constructs where vocabulary acquisition involves need, search and evaluation (Laufer & Hulstijn, 2001). Results show (1) 74% of RV items were activated, (2) ELLs' Productive Vocabulary (PV) increased from 21% to 37%, and (3) unknown vocabulary items decreased from 25% to 14%. In future work we will measure the individual and presumably diverse use of RV.

**Keywords**: vocabulary measurement, receptive vocabulary, corpus-based vocabulary, online creative writing.

## 1.    Introduction

The large number of vocabulary items that are in the RV but not in the PV of highly proficient ELLs causes difficulties in language production (Laufer, 2013). While existing tools mostly measure the properties of RV and PV, and RV-PV ratios, only few studies focus on the learning process of PV (e.g. Pignot-Shahov, 2012).

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Writing activities have been said to promote the development of vocabulary knowledge (Laufer, 2013). Unknown vocabulary items that are unfamiliar to ELLs might require more training before they become RV. RV items, on the other hand, are prime candidates for activation because the items' phonology, morphology, and syntax are already known to the ELL. As such. RV items need to be identified because they should be activated through explicit instruction to become PV(Lee & Muncie, 2006).

To observe how RV changes to PV among groups of ELLs, we ran a two phase study. In Phase 1, to identify the ELLs' RV, we designed and administered a five category multiple-choice online vocabulary survey. In Phase 2, we ran a four stage online creative writing task to improve the ELLs' PV knowledge. ELLs used at least 20 out of 148 RV items that we grouped into ten thematic categories. ELLs received corrective feedback on their RV activation.

## 2. Method

### 2.1. Phase 1: five category multiple-choice online vocabulary survey

Existing tools for measuring vocabulary knowledge include the following: (1) the productive vocabulary level test (Laufer & Nation, 1999), which measures lexical knowledge, but does not necessarily measure vocabulary production (Lee & Muncie, 2006); (2) the English as a foreign language vocabulary test (Meara, 1997), which is fast but lacks reliability (Schmitt, 2014); and (3) the vocabulary knowledge scale (Paribakht & Wesche, 1997), which asks examinees to write sentences, thus improving the reliability of PV measurements but requires more testing and grading time per vocabulary item.

To avoid impeding upon our other learning activities, we needed to measure the levels of vocabulary knowledge of 300 vocabulary items within 15 minutes. Since no existing technique measures at this rate, we developed a radio-button style online survey that ELLs respond to in less than three seconds per vocabulary item.

For each vocabulary item, ELLs chose from five statements: (1) *I never saw this word before*, (2) *I forgot what this word means*, (3) *I can guess what this word*

*means*, (4) *I know what this word means*, and (5) *I use this word when I write or talk*. The choices were based on self-introspection. Items with mean scores between three to four were considered RV items. This survey was conducted two times with a 13-week interval.

The vocabulary items were selected from the college entrance examination stratum of the Hokkaido University English Vocabulary List (Sonoda, 1996). This list stratifies vocabulary items into five levels, from middle school to advanced college. The entrance examination level consists of 2,096 items. Based on our vocabulary survey, we chose thematically-grouped 148 RV items that were likely to belong to the RV of the majority of our 134 ELLs.

## 2.2. Phase 2: four stage online creative writing task

Laufer and Hulstijn (2001) proposed a task-induced involvement construct, where the more cognitively involved ELLs are, the deeper vocabulary knowledge can be acquired. Kim (2011) and Lee and Muncie (2006) both reported positive effect on the development of vocabulary through the adaptation of task-induced involvement in writing activities.

Our ELLs engaged in a four stage online creative writing task over a five week period:

- Stage 1 (preparatory): ELLs wrote an approximately 150-word story on an online forum that was viewable by all 134 ELLs, and read the story aloud to classmates.

- Stage 2 (design): ELLs designed a story by using a template to specify characters, settings, events, and ending.

- Stage 3 (write and activate RV): the 148 target RV items were presented in 10 categories to facilitate ELLs writing task. ELLs wrote a 400 to 600-word story that included at least 20 out of 148 RV items.

- Stage 4 (rewrite): ELLs received corrective feedback, improved writing, and read story aloud to classmates.

The 148 RV items were presented in ten thematic categories to facilitate the ELLs' writing tasks, which are emotion, action, personality, settings, solutions, problems, objects, events, situations, and jobs.

# 3.    Discussion and conclusion

Figure 1 shows that between the pre- and post-surveys PV items increased from 21% to 37%, unknown-vocabulary items decreased from 25% to 14%, and RV items stayed mostly constant at 52 % and 49%. Our results are consistent with Laufer and Goldstein (2004), which states that RV is about 50% of total vocabulary. This suggests that the 700 items that were used in our survey seem to have been appropriately familiar to our ELLs. Moreover, the fact that RV items remain the same also implies that the process of vocabulary knowledge is a developmental continuum (Schmitt, 2014), RV activation is unlikely through one-time practice.

Figure 1.   Percentages of the number of mean response values within four ranges for each of the 700 vocabulary items in the five category multiple-choice online vocabulary survey (the five categories are: (1) *I never saw this word before*, (2) *I forgot what this word means*, (3) *I can guess what this word means*, (4) I *know what this word means*, (5) *I use this word when I write or talk*)
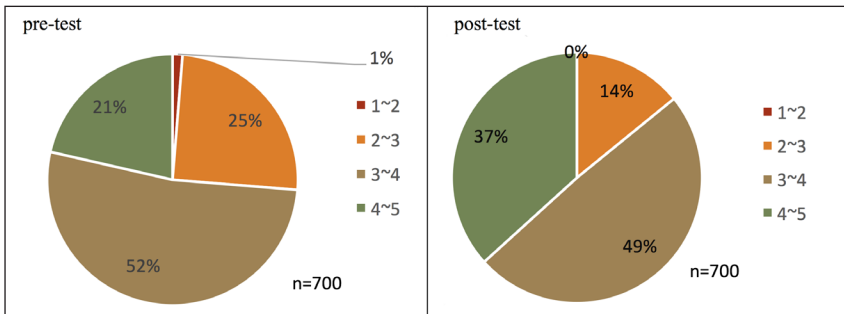


Figure 2.   Percentages of the number of 148 RV items having mean response values in the three to four range or four to five range after the online creative writing task
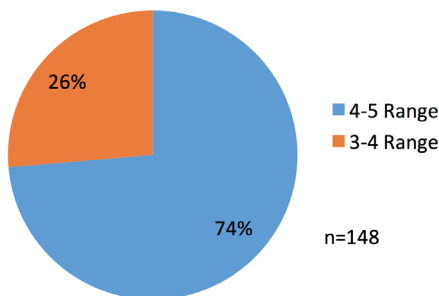
Figure 2 shows that for 74% of RV items the mean response values increased from the three to four range to the four to five range after the online creative writing task. This suggests an increase in vocabulary knowledge. We also observed that the items with large increases occurred frequently in ELLs' writing corpus.

Based on informal interviews conducted after the fourth stage of the writing task, ELLs stated that the writing task was time-consuming, and that writing using the required RV items was a challenge.

For the sake of teaching a group of students uniformly, we assumed that ELLs shared the same 148 RV items. Although results do show that these RV items were activated to PV for our group of students, in future research we might measure individual gains using tools such as Lexinote (Tanaka, Yonesaka, Ueno, & Ohnishi, 2013) that tracks vocabulary acquisition of individuals over time.

With the developmental nature of vocabulary acquisition (Schmitt, 2014), observing PV gains over multiple learning sessions is desirable. We relied on ELL self-introspection to determine vocabulary knowledge. While this technique may be suited for assessing passive memory recall of RV, a more reliable measurement is desired for active memory recall of PV.

ELLs' PV remain small compared to their RV. Though our method may assist instructors in identifying RV items and activating them through writing tasks, the gains of ELLs' PV knowledge remain unclear. A more direct approach to promote ELLs' PV knowledge may be required for future research.

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