Learning vocabulary: CALL program versus vocabulary notebook

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Abstract

This study investigated the short and long-term effectiveness (as measured by pre, post, and delayed post-tests) of two popular but little researched vocabulary learning approaches: 1) vocabulary notebooks and, 2) a Computer Assisted Language Learning (CALL) program with spaced repetition. A third group, the control group, was not given a treatment. The participants included 140 first-year Japanese university students studying English as a second language. Results indicate that similar statistically significant gains were made, in terms of increases in vocabulary scores, from the pre to post-tests for both the CALL and vocabulary notebook groups. In terms of longer term gains, the CALL group performed slightly better. The use of both approaches, with respect to pedagogical soundness and future usability, is discussed. The researchers caution against using vocabulary notebooks and recommend that teachers take into account a number of factors before considering a particular CALL program.
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1. Introduction

One of the most fundamental questions both teachers and learners face when teaching or learning a second language is how to efficiently increase long-term retention of vocabulary. Two vocabulary learning approaches, a Computer Assisted Language Learning (CALL) program and maintaining a vocabulary notebook, were selected for examination in the current study based on the appearance of effectiveness and general popularity. CALL programs generally have the image of being effective as indicated by the ubiquity of language learning software such as Rosetta Stone and Pimsleur (Godwin-Jones, 2010; Nakata, 2011). The United States army had a contract with Rosetta Stone allowing all army personnel access to its "e-learning" CALL program, which ended in 2011 (Rosetta Stone, n.d.). The second approach, keeping a vocabulary notebook, is often encouraged by teachers and researchers alike (Fowle, 2002; Laufer, 2005; Nesi, 2003; Schmitt and Schmitt, 1995; Walters and Bozkurt, 2009). A simple Google search of "vocabulary notebook course syllabus" turned up over 1.6 million results indicating the popularity of this approach in various fields of learning. These approaches, however, have little support by way of empirical

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research (Godwin-Jones, 2010; Walters and Bozkurt, 2009). The current experimentally designed study examines the effectiveness of both approaches in terms of long-term vocabulary acquisition.

2. Literature review

2.1. Deep processing and repetition

Incidental exposure to vocabulary through reading does not appear to be sufficient for long-term acquisition (Peters et al., 2009). Laufer (2003) estimated that to truly learn 108 words from context, second language (L2) learners must read approximately 200,000 words, which is both an unrealistic and ineffective manner of vocabulary study. Peters et al. (2009) argued that three steps are necessary for long-term acquisition: "finding the meaning of an unfamiliar word, subsequent elaborate processing, and repetition" (p. 147). The researchers sought to determine whether the two types of treatments below provided the deep processing and repetition necessary for long-term retention.

2.2. Vocabulary notebooks

Vocabulary notebooks vary in nature, but can be broadly defined as "any form of notebook used for recording new and useful vocabulary and some additional information about the word" (McCrostie, 2007, p. 247). Schmitt and Schmitt's (1995) suggestions for vocabulary notebooks included part of speech, collocations, definition, first language (L1) translation, keyword illustration, semantic mapping, and example sentences, among others.

The goal of the vocabulary notebook is to facilitate cognitive processing of new lexical items for long-term retention (Schmitt, 2000). As concerns efficacy of the vocabulary notebook, little research has been reported. In a study of 19 English learners in Thailand, Fowle (2002) determined that all participants liked using vocabulary notebooks, all felt that this approach to learning was helpful in remembering new and useful words, and 18 of 19 felt the vocabulary notebooks made them better students. The study included only participant self-reports, however, and provided no independent measure of actual vocabulary acquisition.

Walters and Bozkurt (2009) claimed to have conducted the first "empirical study of the effectiveness of the use of vocabulary notebooks by language learners in the classroom setting" (p. 405). The researchers identified 80 target vocabulary items in four weeks of study at a Turkish University preparatory school. All target items were highlighted in course materials and explicitly taught to three classes of students. Two classes (the control group) had no further study whereas the treatment group kept vocabulary notebooks and participated in corresponding vocabulary activities. The vocabulary notebooks incorporated the 20 lexical items for each week along with other aspects of word knowledge such as part of speech, L1 translation, L2 synonyms, antonyms, derivations, and collocations. The notebooks were assessed by the teacher as part of the final course grade. In measures of both receptive and productive use of vocabulary, pre-tests and post-tests administered to the three classes revealed mean gains made by the treatment group (27.78% receptive, 31.03% productive) to be statistically significantly different from gains by the control group. Combined, the gains translated into approximately 19 target words learned by the treatment group as opposed to only one to two words learned by the control groups. One concern, however, was that there was no delayed post-test to account for possible attrition. The current study examines long-term retention of vocabulary over a period of five months culminating with a delayed post-test.

In another study on vocabulary notebooks, students mostly chose to study lower frequency words (above the 3000 word level) even when they had not yet mastered the more basic word levels (below the 2000 word level), choosing instead to study words such as "larynx" and "prognosticator" (McCrostie, 2007, p. 252). If students are studying English for general purposes and have low scores on vocabulary levels tests, for example, then teachers may need to guide students in how to select more common words to study. The current study used only words from the students' course materials from which the researchers selected words thought to be most useful for students.

2.3. CALL

CALL is increasingly offering L2 students a range of opportunities for vocabulary practice and learning over and above pencil and paper activities. One benefit over more traditional forms of vocabulary learning is that computers are "… very patient about repetition and recycling" (Schmitt, 2000, p. 146). A second important benefit is that computers