


Investigating the Effects of L1 and L2 Paper-based Glosses and Their Presentation Formats on EFL Learners' Incidental Vocabulary Acquisition

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Abstract

While there is a substantial body of research on the role of glosses in fostering reading comprehension and vocabulary acquisition, the findings on relative efficacy of first language (L1) and second language (L2) glosses are conflicting. This study investigates the impact of Farsi (L1) and English (L2) paper-based glosses with different presentation formats (in the margin and at the bottom of page) on intermediate-level English as a foreign language (EFL) learners' vocabulary retention and recall. During a two-month treatment, the participants read the passages under one of the four conditions: L1 gloss in the margin (L1-margin), L1 gloss at the bottom of the page (L1-bottom), L2 gloss in the margin (L2-margin), and L2 gloss at the bottom of the page (L2-bottom). Following the treatment, a vocabulary post-test and a month later, a delayed post-test were administered to gauge any vocabulary gains. Results of repeated measures ANOVAs showed the superiority of L1 over L2 glosses (L1-margin > L1-bottom > L2-margin > L2-bottom) in the post-test. The delayed post-test scores revealed the better performance for marginal glosses, regardless of the language of the gloss (L1-margin = L2-margin > L1-bottom > L2-bottom), suggesting that how learners process and retrieve lexical items may vary depending on both language and location of the gloss.

Keywords: loss, gloss location, vocabulary acquisition, retention, recall

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1. Introduction

Considering the importance of vocabulary skill in second language acquisition (SLA), second language (L2) scholars and researchers have used numerous instructional strategies to provide optimal conditions for the incidental vocabulary acquisition. Amongst different strategies adopted are hypertext glosses which serve as an effective learning aid. Glosses or annotations (used interchangeably in this paper) are supplementary information ranging from textual explanations to pictorial cues and animations which are used in electronic web-based or printed paper-based formats (Abuseileek, 2011). Rather than looking up the meaning of unknown words from dictionary, glossing affords immediate access to the meaning of the word with no or minimum interruption. This study aims to extend the current knowledge on glossing literature by exploring the relative efficacy of L1 and L2 gloss with different presentation formats (in the margin and at the bottom of the page) on vocabulary acquisition of L2 learners.

2. Literature Review

The impact of glossing on L2 reading comprehension and vocabulary learning has been documented in a number of studies. Most of these studies (e.g., Abuseileek, 2011; Chen & Yen, 2013; Khezerlou, Ellis, & Sadeghi, 2017; Ko, 2012) have centered on the gloss type (textual, verbal, visual, or a combination of them), with few studies (e.g., Choi, 2016; Miyasako, 2002; Yoshi, 2006) touching the gloss language (whether the gloss is offered in L1 or L2). The few existing studies on L1/L2 glossing have reported mixed findings, and more research is required to arrive at more robust evidence on clear superiority of either gloss. Apart from gloss type and language, new interests and concerns have been recently aroused regarding the presentation format of the gloss (the location of gloss in relation to the glossed word), with no conclusive evidence on relative effectiveness of different locations of the gloss. Accordingly, this study aims to extend the current knowledge

on glossing literature by exploring the relative efficacy of L1 and L2 gloss with different presentation formats (in the margin and at the bottom of the page) on vocabulary acquisition of L2 learners. The following research questions were specifically addressed:

1. Do learners who have access to paper-based L1 and L2 glosses while reading an L2 passage perform differently on vocabulary retention and recall?
2. Does the presentation format of glossing (in the margin of or at the bottom of the page) result in significantly different vocabulary gains?
3. What are the learners' perceptions toward hypertext glossing?

3. Methodology

3.1. Participants

A total of 176 (112 males and 64 females) intermediate-level non-English-major freshman and sophomore students studying at the University of Bonab (located in East Azarbaijan province, Iran) participated in this study. The participants were native speakers of Farsi with the mean age of ($M = 19.3$, $SD = 3.21$) and an average of 6.3 years of formal English learning prior to their entrance to the university.

3.2. Instruments

Three versions of a multiple-choice vocabulary test (pretest, post-test, and delayed post-test) and a questionnaire were used as instruments. The vocabulary test included 30 items chosen from the passages covered during the treatment. The tests were scored by the teacher (researcher), and each correct response was awarded 1 point, for the maximum test score of 30.

The questionnaire was administered to elicit the participants' attitudes towards

glossing type and location, a five-item survey questionnaire was designed. It included three open-ended questions (checking the participants' preference for gloss/no gloss, the language of the gloss, and the location of the gloss) and two multiple-choice items which required the participants to choose how often they consulted the glosses and how they perceived glossing.

3.3. Procedure

The treatment lasted for two months, 13 sessions of 45 minutes. Three sessions were allocated for administering the pretest, post-test and delayed post-test. During each of the remaining 10 sessions, one passage (a total of 10 passages) was covered from the students' textbook, *Read This 3* (Savage, 2010), published by Cambridge University Press. Each passage is approximately 350 words. Twenty keywords introduced prior to each passage were adopted as the glossed words.

The teacher adapted the passages by marking each of the glossed words in boldface and by creating four versions of hypertext glossing based on the type and location of the gloss: (a) L1 glossing in the margin (L1-margin), which offered the L1 translation of the glossed word in the text margin; (b) L1 glossing in the bottom of the page (L1-bottom), which listed L1 translations of the keywords at the bottom of the page; (c) L2 glossing in the margin (L2 margin), which presented the L1 translation of the word in the margin of the text, and (d) L2 glossing in the bottom of the page (L2-bottom), where L2 translations of the keywords appeared at the bottom of the page.

The five classes were randomly assigned to L1-margin, L1-bottom, L2-margin, L2-bottom, and control groups. While the experimental groups read passages with glossed words, the control group read the same texts with no access to glosses. The day after the last instructional session, the post-test and one month later, the delayed post-test were administered.

4. Results

After ensuring the normal distribution of the data ($p > 0.05$). A series of repeated measures analysis of variance (ANOVA) s and paired comparisons were conducted on vocabulary retention and vocabulary recall test scores. The findings provided supportive evidence for the effectiveness of gloss over no-gloss in L2 vocabulary learning. As for the type and location of the glosses (the focus of research questions 1 and 2), the trend was L1-margin > L1-bottom > L2-margin > L2-bottom in the post-test and L1-margin = L2-margin > L1-bottom > L2-bottom in the delayed post-test. Concerning learners' perceptions toward glosses (research question 3), the results of survey questionnaire revealed their favorable attitudes.

This findings contribute to the existing literature on vocabulary glosses by verifying the positive role of L1 and L2 glosses with different annotation formats in incidental vocabulary learning. The superiority of gloss over no gloss conditions supports the theoretical underpinnings of consciousness raising and input enhancement. Boldfacing the glossed word draws learners' attention to the word and its corresponding glossing, whether in the form of L1, L2, synonyms, definitions, and explanations. This entails learners' noticing (Schmidt, 1990) of form-meaning connections and as a result facilitates conversion of input to intake. The overall superiority of L1 glosses supports the concept of lexical representations (Levelt, 1989). Based on this concept, L1 and L2 glosses represent different types of form-meaning mappings at encoding and retrieval stages (Choi, 2016). As suggested by Yoshi (2006), at lower levels of language processing, the associations made by learners between an L2 form and its corresponding concept is far stronger than the associative links created between L2 forms and concepts. That the participants derived more benefit form marginal in comparison to bottom-of-the-page glosses may be attributable to the physical proximity of the gloss and the glossed word. This is in line with the studies by Chen (2016) and Abuseileek (2011) who found better vocabulary gains associated with using glosses embedded in the text or as close to the glossed word. The findings

suggest teachers and educators to make use of paper-based, as well as e-glosses. Effectively designed glosses, in addition to clarifying the meaning of L2 words, may promote learners' knowledge of different facets of the word