
RESEARCH ARTICLE

The Relative Effectiveness of Gap Filling, Summary Writing and Sentence Making in EFL Vocabulary Acquisition

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ABSTRACT

This study investigates whether reading task type affects English as a foreign language (EFL) learners' vocabulary acquisition or not. 68 EFL learners are divided into three groups at random, assigned to one of three reading tasks of learning 15 target words of meaning and part of speech. The tasks are designed based on the Involvement Load Hypothesis (ILH), which induces need (N), search (S), and evaluation (E) as components of involvement. The three tasks involve the same or different components: gap filling (+N, -S, +E), summary writing (+N, -S, +E) and sentence making (+N, -S, ++E). The findings are summarized as follows: the higher involvement loads a reading task induces, the more word meaning and part-of-speech knowledge EFL learners can acquire; the effects of tasks with equal involvement loads are identical on EFL learners' acquisition of word meaning and part-of-speech knowledge. The results support the ILH and have some implications for English teaching.

KEYWORDS

Involvement Load Hypothesis, Vocabulary acquisition, Reading task, English as a foreign language (EFL)

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1. Introduction

It is a common-sense notion that vocabulary acquisition plays an incomparable role in learning a second language (L2). Wilkins also suggests very little can be conveyed without grammar, and nothing can be conveyed without vocabulary (1972). The poor method of learning by rote is obviously out-of-date and not effective enough, and language researchers and teachers have made numerous efforts to explore an appropriate way to help learners foster successful vocabulary acquisition, some of whom claim new words can be acquired through reading passages to some extent (Nagy, Herman & Anderson, 1985; Krashen, 1989; Laufer, 2001). Nevertheless, just reading is not enough; reading plus doing tasks related to target words contributes a lot to promoting vocabulary acquisition (Wesche & Paribakt, 2000). Therefore, the problem researchers are facing now is to figure out what kind of reading task is most conducive to acquiring target words. As an effective method of acquiring words, task-based vocabulary acquisition has become the research hotspot. The well-known theory in the field of vocabulary acquisition is the Involvement Load Hypothesis (ILH), predicting that a higher task-induced involvement load is associated with better word retention. Since the theory was proposed, many researchers have tried to verify it. However, the results are inconsistent. The thesis investigates the relative effectiveness of gap filling, summary writing and sentence making in EFL vocabulary acquisition to validate the ILH.

2. Research questions

This study is an attempt to compare the relative effectiveness of gap filling, summary writing and sentence making tasks with different involvement loads through reading passages in EFL vocabulary acquisition.

Specifically, it is to investigate the following questions:

1) Is a task with a higher involvement load more effective than that with a lower involvement load in EFL vocabulary acquisition?

a. Is a task with a higher involvement load more effective than that with a lower involvement load in the acquisition of word meaning knowledge?

b. Is a task with a higher involvement load more effective than that with a lower involvement load in the acquisition of word part-of-speech knowledge?

2) Are the effects of tasks with equal involvement loads identical on EFL vocabulary acquisition?

a. Are the effects of tasks with equal involvement loads identical on the acquisition of word meaning knowledge?

b. Are the effects of tasks with equal involvement loads identical on the acquisition of word part-of-speech knowledge?

3. Method

This study employed a single-factorial design, in which the involvement load induced by reading tasks was the independent variable, and the score of the vocabulary knowledge posttest was the dependent variable. The score of the posttest was evaluated from two aspects: the score of word meaning knowledge and the score of part-of-speech knowledge.

60 first year EFL learners participated in this experiment. They came from three intact classes and were randomly assigned to one of the three reading tasks (gap filling, summary writing and sentence making). To prevent participants from knowing target words, they had to complete a vocabulary knowledge pretest. Finally, 15 target words were chosen for this study. Min's (2008) 4-item modified VKS (Vocabulary Knowledge Scale) was applied to this study.

The whole experiment was conducted during the night-study time. Participants completed the vocabulary knowledge pretest first under the supervision of teacher assistants and the researcher. After one week, they finished their own gap filling (+N, -S, +E), summary writing (+N, -S, +E) and sentence making (+N, -S, ++E) tasks and were asked to write down the starting and ending time. The average time to complete each task was about 20 minutes. At last, they would complete the vocabulary knowledge posttest for about 15 minutes as soon as they finished the above tests. Participants were requested to write down the word part of speech first and then choose one from five answers about word meaning in the vocabulary knowledge posttest. During the whole process of the experiment, they were allowed to hand in tests in advance. All the collected data were submitted to SPSS 25.0 and analyzed by one-way ANOVA.

4. Results

This part presents the effects of the three reading tasks on EFL learners' acquisition of word meaning and part of speech. The results are presented in two figures and six tables.

4.1 Descriptive statistics

Table 4.1 Descriptive statistics of EFL learners' word meaning knowledge

	<i>M</i>	<i>SD</i>	<i>N</i>
Gap filling	18.30	6.87	20
Summary writing	17.98	8.03	20
Sentence making	24.78	9.50	20
Total	20.35	8.85	60

M = mean, SD = standard deviation, N = sample size

From Table 4.1, the mean scores of the three groups are 18.30, 17.98 and 24.78, respectively. We can see that the mean of gap filling task is the lowest and that of sentence making task is the highest. None of them is 0, indicating all participants acquire new word meaning knowledge more or less through reading.

Obviously, the sentence making task performs better than the other two tasks, and the gap filling task performs a little better than the summary writing task in the acquisition of word meaning knowledge. The difference between the performance of the gap filling task and that of the summary writing task is small.

Table 4.2 Descriptive statistics of EFL learners' word part-of-speech knowledge

	<i>M</i>	<i>SD</i>	<i>N</i>
Gap filling	5.03	.99	20
Summary writing	4.78	1.09	20
Sentence making	5.88	1.05	20
Total	5.23	1.13	60

M = mean, SD = standard deviation, N = sample size

As is shown in Table 4.2, the mean score of the sentence making task is higher than that of the gap filling task and that of the summary writing task in the acquisition of word part-of-speech knowledge, suggesting the sentence making task is superior to the two other tasks. There exists a subtle difference between the mean of the gap filling task and that of the summary writing task, which shows the performance of the gap filling task is a little better than that of the summary writing task.

4.2 Comparisons between the tasks in EFL vocabulary acquisition

Table 4.3 ANOVA of task effects on EFL learners' acquisition of word meaning knowledge

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	588.47	2	294.24	4.37	.017
Within Groups	3838.18	57	67.34		
Total	4426.65	59			

As Table 4.3 indicates, task type has significant effects on EFL learners' acquisition of word meaning knowledge ($F(2,57) = 4.37, p < .01$). But the ANOVA table does not show where a significant difference lies. So post hoc multiple comparisons were made to specify the differences. Table 4.3 reports the results from the comparisons.

Table 4.4 Comparisons between the tasks in word meaning knowledge

	Task (I)	Task (J)	<i>MD(I-J)</i>	<i>SE</i>	<i>p</i>	<i>95% CI</i>	
						Lower	Upper
HSD	Task 1	Task 2	.33	2.59	.991	-5.92	6.57
	Task 1	Task 3	-6.48	2.59	.040	-12.72	-.23
	Task 2	Task 3	-6.81	2.59	.030	-13.04	-.56

Task 1 = Gap filling task, Task 2 = Summary writing task, Task 3 = Sentence making task

HSD was applied to explore whether there existed a significant difference between paired groups. Table 4.4 shows the sentence writing task, which has the highest involvement index, is obviously superior to the gap filling task ($p < .01$) and the summary writing task ($p < .01$), and the gap filling and summary writing tasks fare equally well ($p > .05$) in the acquisition of word meaning knowledge.

Table 4.1 ANOVA of task effects on EFL learners' acquisition of word part-of-speech knowledge

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	13.30	2	6.65	6.07	.004
Within Groups	64.41	57	1.10		
Total	75.71	59			

As presented in Table 4.5, the ANOVA analysis indicates there exists a significant difference among the three groups ($F(2,57) = 6.07$, $p < .01$), implying the effects of these tasks on learning word part-of-speech knowledge are quite different.

Table 4.6 Comparisons between the tasks in word part-of-speech knowledge

	Task (I)	Task (J)	MD(I-J)	SE	p	95% CI	
						Lower	Upper
HSD	Task 1	Task 2	.25	.33	.732	-5.55	1.05
	Task 1	Task 3	-.85	.33	.034	-1.65	-.05
	Task 2	Task 3	-1.10	.33	.004	-1.90	-.30

Task 1 = Gap filling task, Task 2 = Summary writing task, Task 3 = Sentence making task

As is shown in Table 4.6, the mean score of sentence making task is higher than that of gap filling task and that of the summary writing task. In addition, the 95% CI of the gap filling task and that of the summary writing task overlapped, indicating no significant difference between the two tasks in the acquisition of word part-of-speech knowledge. The relative effectiveness of the three tasks in the acquisition of word part-of-speech knowledge can be summarized as follows: sentence making > gap filling = summary writing task.

As a whole, these findings suggest that the more involvement load the reading task induces, the better the acquisition of word meaning and part-of-speech knowledge, and different tasks with the same involvement index are equally effective in enhancing EFL vocabulary learning. Therefore, it lends strong support to the ILH, indicating that task-induced involvement is crucial to EFL learners' acquisition of vocabulary knowledge.

4.3 Means plot

Figure 4.1 Means plot of word meaning knowledge across tasks

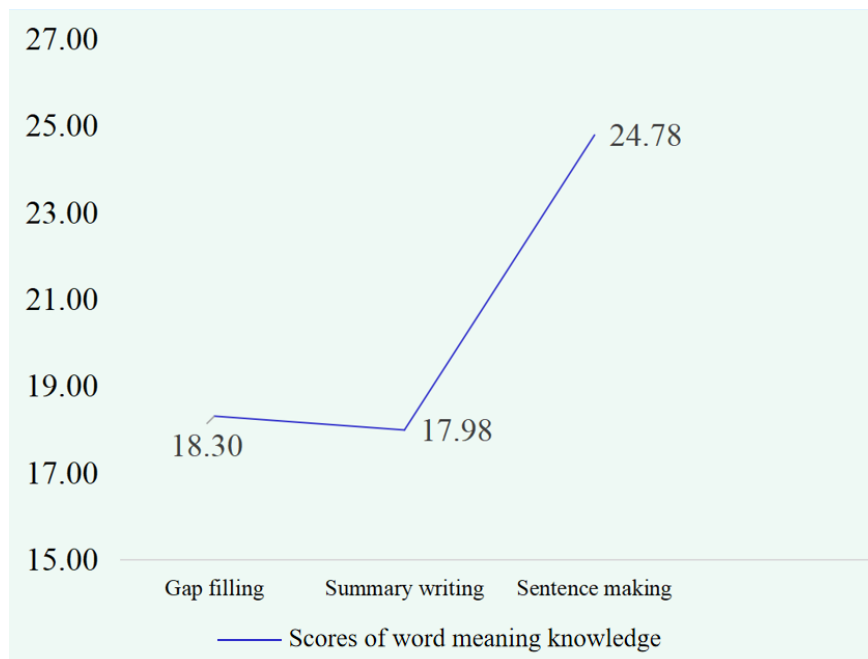
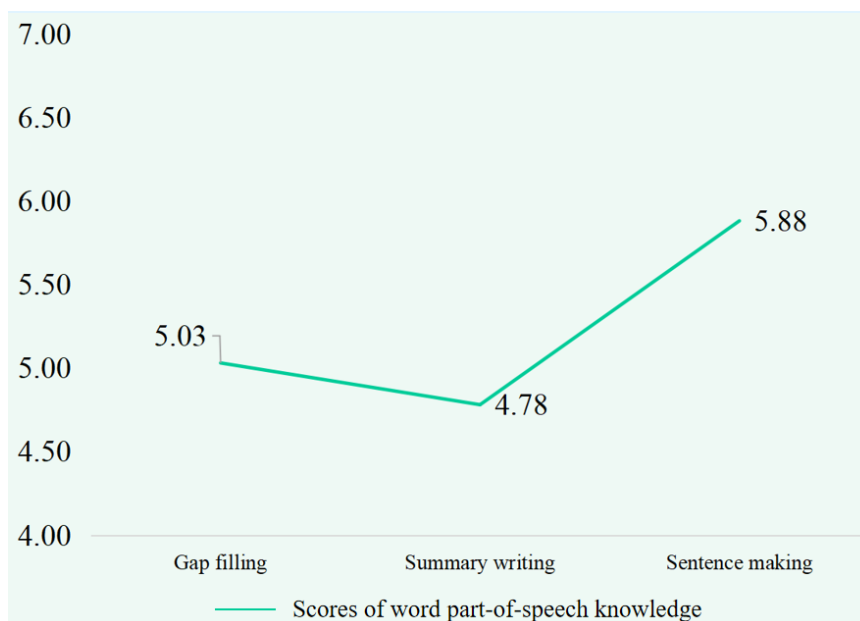


Figure 4.2 Means plot of word part-of-speech knowledge across tasks

As is shown in Figure 1 and Figure 2, the mean of the sentence making task ranks first, the mean of the gap filling task ranks second, and the mean of the summary writing task ranks last.

In general, both figures suggest that the gap filling task performs a little better than the summary writing task in facilitating learning word meaning and part-of-speech knowledge, though no significant difference was found between the two tasks. The finding may be associated with exposure frequency. In the gap filling task, the participants need to compare the meanings, parts of speech, and usages of the target words to decide on the most appropriate word to match the sentence. Such comparison and evaluation kept going until they finished all blanks in the sentences, while in the summary writing task, such multiple and frequent exposures could not occur because no comparison was needed.

5. Discussion

This study compared the effects of the three tasks on EFL learners' acquisition of two types of vocabulary knowledge, i.e., word meaning knowledge and part-of-speech knowledge. The results are discussed from the two aspects.

As to the acquisition of word meaning knowledge, the sentence writing task, which had the highest involvement index, was obviously superior to the gap filling and summary writing tasks ($p < .01$), and the gap filling and summary writing tasks fared equally well ($p > .05$). As to the acquisition of word part-of-speech knowledge, the relative effectiveness of the three tasks can be summarized as follows: sentence making (an index of 3) > gap filling (an index of 2) = summary writing task (an index of 2). These findings suggest that the more involvement load the reading task induces, the better the acquisition of word meaning and part-of-speech knowledge, and different tasks with the same involvement index are equally effective in enhancing EFL vocabulary learning. Therefore, it lends strong support to the ILH, indicating that task-induced involvement is crucial to EFL learners' acquisition of vocabulary knowledge. Comparing the current results with those of the previous studies, we find they support Tong (2012), who found the sentence making task (+N, -S, ++E) was superior to the gap-filling task (+N, -S, +E). It also supports Kim's (2008) argument that tasks with the same task-induced involvement would have similar effects on word retention since Kim found that the sentence and writing composition tasks (+N, -S, ++E) performed equally well in facilitating L2 vocabulary learning.

Figure 4.1 and Figure 4.2 suggest that the gap filling task performs a little better than the summary writing task in facilitating learning word meaning and part-of-speech knowledge, though no significant difference was found between the two tasks. The finding may be associated with exposure frequency. In the gap filling task, the participants need to compare the meanings, parts of speech, usages and phrase collocations of the target words to decide on the most appropriate word to match the sentence. Such comparison and evaluation kept going until they finished all blanks in the sentences. Even after completing all sentences, they needed to review and recheck the answers, while in the summary writing task, such multiple and frequent exposures could not occur because no comparison was needed. The participants were only required to convey the main content of the passage by

using the target words, and how and when to use these words was not required; hence they were less likely to compare or reconsider these target words.

The finding that frequent exposure to words is likely to lead to better word retention has been confirmed in many studies (Folse, 2006; Kweon & Kim, 2008; Eckerth & Tavakoli, 2012; Bao, 2015). For example, Bao (2015) argued that a high frequency of word encounters might foster word retention. In comparison with four different tasks (definition, combining, translation and choice) with the same task-induced involvement and one control task, he found the effect of the definition task on receptive vocabulary knowledge was superior to that of other tasks because the definition task required multiple comparison and evaluation of target words; Feng (2019) investigated whether the context and word frequency exposure were related to vocabulary acquisition among six groups of 180 EFL learners under six different conditions by setting the occurrence of the rate as 1, 5 and 10 times respectively. The results show the two groups which were exposed most to the 15 target words outperformed the other 4 groups in acquiring receptive and productive knowledge of word form. In the experiment conducted by Kweon and Kim (2008), authentic literary texts were employed to explore whether word occurrences make a difference in word learning, and it turned out that the higher the word frequency, the better the word retention.

6. Conclusion

On the basis of the ILH, the present study investigated the relative effectiveness of gap filling, summary writing and sentence making tasks in EFL vocabulary acquisition. The findings can be summarized as follows: tasks involving higher loads have more chances to promote the acquisition of vocabulary knowledge like word meaning and part-of-speech knowledge; tasks with equal involvement load are closely related to the identical acquisition of word meaning and part-of-speech knowledge. In terms of the subtle difference in the effects of gap filling tasks and summary writing tasks on EFL vocabulary acquisition, exposure frequency of words can affect word retention.

This study has both theoretical and pedagogical implications. Theoretically, this research provides strong support for the ILH, which enriches the theories in the field of L2 acquisition. The finding that frequent exposure to words can promote vocabulary acquisition provides research direction for future studies. Pedagogically, EFL teachers can design reading-passage tasks with high task-induced involvement load, such as sentence making tasks, to foster vocabulary learning.

This experiment is well designed and strictly implemented; the results are analyzed carefully too. Even so, it still has drawbacks to be improved. First, the number of subjects is not large enough, and subjects all come from the same grade in the same university. Both the size and range of subjects are limited, as well as gender, which may affect the conclusion of the study. Second, this study only investigated the effects of the three tasks on immediate vocabulary acquisition; whether the findings are applied in delay, vocabulary tests are worth attention. In further studies, subjects with larger scales are expected, and some intervening variables such as interest, motivation, contextual cluing, and time spent on tasks that may confound the results will be taken into consideration.

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