THE EFFECT OF MULTIMEDIA GLOSSES ON VOCABULARY DEVELOPMENT OF INTERMEDIATE EFL LEARNERS

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ABSTRACT

Technology has got a very important role in vocabulary learning. The present study investigated the effect of multimedia gloss on incidental vocabulary learning of 52 English learners at intermediate level as opposed to paper gloss vocabulary learning. The subjects were divided into two groups, multimedia gloss and paper gloss. A pre-test and a post-test were administered to the groups and the scores were analyzed using Wilcoxon Signed Rank Test. The findings showed that the multimedia gloss group significantly outperformed the paper group in terms of short-term retention of incidentally learned vocabulary items. Due to the limited time, longer-term retention of the words was not measured. The findings showed that multimedia gloss can benefit intermediate EFL learners in terms of vocabulary learning.

KEY-WORDS: Multimedia Gloss, Paper Gloss, Intermediate EFL Learners, Incidental Vocabulary Learning

INTRODUCTION

Vocabulary knowledge has a key role in successful reading. There is a direct relationship between second language vocabulary and reading process. The research shows that reading comprehension increases vocabulary knowledge which in it turn enhances reading comprehension.

The EFL/ESL learners can enjoy reading if they do not look for unknown words in dictionary. On the other hand, lack of noticing can lead to unsuccessful reading. As mentioned by Schmidt (1995), Noticing Theory emphasizes that conscious attention is the first stage of learning. In other words, if the readers do not pay attention to unknown words, the vocabulary learning will not happen. Nation (2002, pp. 174-175) defines gloss as “a brief definition or synonym of unknown words provided in text in L1 or L2”. According to Yoshii (2006) and Nation (2002) glossing can result in enhancing vocabulary learning among ESL/EFL learners through noticing to unknown vocabularies. According to Watanabe (1997) glosses are valuable tools which facilitate foreign language reading process. As it was mentioned by Ko (2005) and Nation (2002) the use of gloss by EFL/ESL learners is easier and it can facilitate reading flow in comparing to using dictionary which is time-consuming and make learners interrupt their reading process. Moreover, Nation (2002) refers to glosses as helpful tools that can make EFL/ESL learners more autonomous in reading activity.

Numerous researchers such as Poole (2011); Yee (2010); Fang (2009); Lage (2008); Yoshii (2006); Loucky (2005), and Watanabe (1997) studied the effects of glossing on vocabulary learning. As the researchers mentioned to the advantages of glossing in vocabulary learning, research questions changed from effects of glossing to type of glossing.
In a study, Lyman-Hager and Davies (1996) investigated the effects of multimedia glosses on vocabulary learning. They integrated a computer program into the French foreign language curriculum for 262 intermediate level students. Two conditions were considered in this study: computerized reading and non-computerized reading using an excerpt of Oyono's 'Une Vie de Boy'. Both groups had access to glosses: the computer group had access to multimedia glosses as the experimental group, and the control group read only the printed text of the same glosses. Then, they were asked to write the recall protocols. The written recall protocols' results showed the better performance of the experimental group who had access to the computer program compared to the control group that had only access to paper glosses.

In another study, Chun and Plass (1996a) investigated the effects of multimedia annotations on incidental vocabulary learning. They conducted three studies with learners in their second year of German who used Cyberbuch, that is one type of multimedia application offering different kinds of annotations (picture, text, video). The positive results of their research confirmed previous studies that showed the effectiveness of various types of annotations on retention of new foreign vocabularies. Furthermore, this study showed that visual multimedia advance organizer helps recalling new vocabularies as well as reading comprehension, that emphasizes the close link between vocabulary and reading comprehension (Chun and Plass, 1996b: 512). The results of the recall protocols showed that text plus picture annotations group outperformed the other groups in reading comprehension.

According to Khiyabani et al. (2014) who attempted to present the effectiveness of multimedia on vocabulary learning, 56 high school students were divided into experimental and control groups each contained 28 participants. Multimedia techniques were used for teaching vocabularies to the experimental group. Three months (twelve sessions) later, a post-test was conducted to measure the learners' vocabulary knowledge in both groups. The results showed that the experimental group using multimedia outperformed the control group in retention of vocabulary.

As the results of the previous studies showed, no consistency can be found in the findings of the studies in relation to various gloss type, and the effectiveness of multimedia glosses on learning vocabulary still remains as an open question which needs more investigation. Accordingly, in this study the researcher aimed to address this issue from a new viewpoint.

THEORETICAL FRAMEWORK

The researcher has focused on some psychological theories which are related to learning among ESL/EFL learners such as Noticing Hypothesis (Schmidt, 1995), and Dual Coding Hypothesis (Paivio, 1991).

As mentioned before, Schmidt's (1995) Noticing Hypothesis emphasized that learners must “notice” critical features in utterances. According to Schmidt “noticing” is the subjective correlate of what psychologists call “attention”. Schmidt stressed that intentional attention is necessary in successful learning. Accordingly, in this study the researcher provided various gloss types in order to take the EFL learners’ attention to unknown words and to facilitate their vocabulary learning.

Furthermore, Paivio’s (1991) Dual Coding Theory emphasizes that, two separate symbolic systems can facilitate second language learning while they interconnect and work independently at the same time. Paivio noted that this simultaneity reinforces the recalling of the processed information and it also facilitates cueing from a system to another system. Double coding the information can work as a complement which gives the learners the opportunity to process the information twice that can result in longer retention of the vocabularies that were learned newly. Accordingly, in this study, the researcher provided the participants with multimedia glosses in order to maximize the possibility of dual information processing. It seems that the provision of multimedia glosses can result in better reading comprehension as well as longer vocabulary retention.

Research Question

The present study aims to address the following question:

Is there any significant difference between groups subjected to multimedia gloss and paper gloss in learning vocabulary?

Research Hypotheses

The researcher is going to test the following hypotheses:

H₀: There is no significant difference in vocabulary learning between groups subjected to multimedia gloss and paper gloss?

H₁: There is a significant difference in vocabulary learning between groups subjected to multimedia gloss and paper gloss?

METHODOLOGY

Participants and setting

The participants in the present study were students in grade two in Farzanegan high school in district 11, Tehran. They were female students and all aged between 15 and 16. The two classes consisted of a total number of 52 students: 26 in experimental group and 26 in control group. Two classes were instructed by the same teacher. They all had the same exposure to English through formal classes in high school. Similarly, due to belonging to the same city, it was reasonable to suppose that they had a homogeneous EFL background. Furthermore, they were the same age
and gender. The students in both groups were not aware about the research procedure, tests, and treatment. Two weeks after finishing the treatment, that lasted three months, one session per week in the second half of the educational year 1393-94, a post-test was administered. Each student had 25 minutes time to answer the questions. glosses that were designed to help students to learn the unknown vocabularies and understand the text. The control group read the same text with paper glosses.

Both group had the same number of hours of instruction that was once a week, thirty minutes each which lasted for three months. A post-test was administered after the treatment in both experimental and control group. The time allotted for the post test was 25 minutes. Also, both tests had an equal number of test items, 25. After scoring, the scores obtained on the tests were analyzed using nonparametric procedures since the selection of the groups was based on randomization and the number of the participants was relatively small. The results are presented in the next section.

RESULTS

After administration of the tests, the author used nonparametric procedures to analyze the data through SPSS 19. To examine the data for the possible existence of extreme scores, the Wilcoxon Signed Rank Test was used, and the results indicated that there was no significant difference between two groups before the treatment. The descriptive statistics of the pre-test are shown in table 1, and the results obtained through the Wilcoxon Signed Rank Test are shown in table 2.

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest paper gloss</td>
<td>26</td>
<td>5.9000</td>
<td>2.0119</td>
<td>3.00</td>
</tr>
<tr>
<td>Pretest multimedia Gloss</td>
<td>26</td>
<td>6.2333</td>
<td>1.8182</td>
<td>4.00</td>
</tr>
</tbody>
</table>

Table 1: Descriptive Statistics of the Pre-test

| Z Sig. Asymp. (2-tailed) | -.861a | .396 |

Table 2: Test Statistics of the pre-test

a. Based on negative ranks
b. Wilcoxon Signed Ranks Test
As illustrated in table 1, the obtained value for Z is -.861 with a significance of .396, which confirms that there is no significant difference in performance in the pre-test between two groups. In other words, the two research groups started with a similar pre-test.

**Comparison of means for the post-test**

After administration of a multiple choice vocabulary test, the scores of the post-test were obtained. Furthermore, due to the nature of the sample in this study, the non-parametric Wilcoxon Signed Rank Test was used to examine the differences between pre-test and post-tests of two groups.

**Table 3: Descriptive Statistics of the Post-test**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttest Paper gloss</td>
<td>26</td>
<td>8.500</td>
<td>2.58567</td>
<td>4.00</td>
<td>14.0</td>
</tr>
<tr>
<td>Posttest Multimedia gloss</td>
<td>26</td>
<td>11.867</td>
<td>1.6762</td>
<td>9.00</td>
<td>15.0</td>
</tr>
</tbody>
</table>

**Table 4: Test Statistics of the Post-test**

<table>
<thead>
<tr>
<th></th>
<th>Pretest multimedia gloss</th>
<th>Pretest paper gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z Sig. Asymp. (2-tailed)</td>
<td>-2.874a</td>
<td>.006</td>
</tr>
</tbody>
</table>

As illustrated in table 3, the mean of the scores obtained for the paper gloss group (8.500) is smaller than the score means of the multimedia group (11.867). The Z obtained through the Wilcoxon Signed Rank Test (table 4) has a value of -2.874 and the significance for this value is .006 (table 4), which indicates that there is a significant difference between the two groups. Therefore, based on these results, the null hypothesis of the research is rejected. Regarding the research question, it can be claimed that multimedia gloss group outperformed the paper gloss group in short-term retention of incidentally-learned vocabulary items.

The results of the present study indicate that using multimedia gloss can be applied as a useful technique for teaching new vocabularies. It should be mentioned that due to the limited number of the participants in the present study, it is suggested to employ larger samples and population for generalization of the results and findings in the future.

**DISCUSSION**

In the answer to the research question, the results revealed that there was a significant difference between multimedia gloss and paper gloss groups in vocabulary gain that was in accordance with the study of Lyman-Hager and Davies (1996) in which the results of the written recall protocol showed that the experimental group who used the computer program to read the text significantly outperformed the control group who had access to paper glosses.

Similarly, all the participants in multimedia gloss group outperformed the subjects in paper group. Therefore, the present study reconfirmed the usefulness of multimedia gloss in incidental vocabulary learning that confirms Chun and Plass’s (1996a) research that present the positive results of three studies in which visual multimedia advance organizers were found to help not only recalling new words, but also act as facilitators of reading comprehension.

Moreover, the results of the present study was in accordance with the results of the study conducted by Khiyabani et al. (2014) who reported that using multimedia was more effective in acquisition and learning unknown vocabulary than traditional methods.

Furthermore, the better performance of participants in multimedia gloss condition in vocabulary gain,
confirmed the Dual Coding Hypothesis (Paivio, 1991) according to which two separate symbolic systems help L2 learners acquire language better.

The research results also confirmed the Schmidt's (1995) Noticing Hypothesis in which he noted that it is necessary to pay intentional attention to learn language successfully. Accordingly, in the present study, the provision of different gloss types is likely to take the learners’ attention to unfamiliar words and to facilitate their vocabulary learning.

CONCLUSION

In the present study, teaching vocabulary through using multimedia gloss and paper gloss were compared. The result is encouraging. The findings suggest that multimedia glosses are more effective than paper glosses in learning vocabulary. The results showed that the students in the experimental group outperformed the students in control group. It is suggested to the English teachers to use multimedia glosses in teaching vocabulary that can led to better understanding. Using multimedia glosses can help teachers to save time and energy in the class. Regarding the new technologies in the 21th century, it is time to look for new ways of teaching vocabulary to increase the size of students' vocabulary knowledge.

REFERENCES