

The Effect of L and L2 Word Glossary on Learning of Technical Vocabulary in Reading Comprehension Texts

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Abstract: Recent studies suggest that word marginal glossaries are very useful in reading text when readers have no knowledge about some words and help them comprehend the text without wasting time for looking up the word meaning in dictionaries or making mistakes because of incorrect guessing the word meaning according context. The study aimed to compare the effect of L1 & L2 word glossary on learning and retention of technical vocabularies of Civil Engineering students. The research question is: 'Is there any relation between retention and learning of technical vocabulary and using of glossaries?' If so, what is the difference between using of L1 and L2 word glossary and which of these two sorts has more effect on retention and learning of technical vocabulary? and the considered hypothesis is 'The effect of L1 and L2 word glossary is similar on retention and learning of technical vocabulary'. The study was done by two tests (test 1 & test 2) with five passages of reading comprehension. In test 1, the definition of words in word glossary of technical vocabularies is in English language (L2) and in test 2, the definition of the vocabularies is in Persian language (L1). These two tests were administered one after another with 15 minutes break between them and 45 minutes was considered to answer the questions for each test. The same students participated in two tests. They were 40 Civil Engineering students of Engineering Technical University (Azad University), Chaloos branch. All of them were male and they were selected after administering a placement test among 60 Civil Engineering students of the university. The placement test was administered one week before the main tests. Comparison the scores of two tests and analyzing them showed that the students answer test 2 (with Persian word glossary) better than test 1 (with English word glossary). Although there were students that answer test 1 better than test 2 and some of them act the same in two tests, most of them answer test 2 (with Persian word glossary) better than test 1 (with English word glossary) and totally result disapprove the hypothesis of the study and it can be said L1 word glossary is more effective than L2 word glossary on learning and retention of vocabularies and also technical word glossary.

Key Words: vocabulary, vocabulary learning, incidental vocabulary learning, gloss and glossary.

Introduction

In learning a foreign language, vocabulary plays an important role. It is an element that links the four skills of speaking, listening, reading and writing all together. Words are perceived as the building blocks upon which the knowledge of the second language can be built (Celce-Murcia, 1991). In order to communicate well in a foreign language, students should acquire an adequate number of words and should know how to use them accurately. Vocabulary learning can take place in two general ways: intentional and incidental. Intentional learning is designed, planned learning and incidental learning is the accidental learning of information without the intention of remembering that information. Incidental vocabulary learning takes place without awareness that involves just implicit learning processes (Krashen, 1993). An incidental way of assisting students in their reading and vocabulary learning is using glosses. Glosses help students to enhance general comprehension, improve vocabulary retention, and save student's time and effort in reading L2 texts. Glosses have various functions in helping to decode the text by providing additional knowledge in specific content, skills, strategies, and definitions of additional knowledge in specific content, skills, strategies, and definitions of difficult words. In the case of second language (L2) learning, gloss generally means information on important words via definitions or synonyms. Traditionally,

glosses provide a short definition or note in order to facilitate reading comprehension processes for L2 learners (Lomika, 1998). This study explores incidental vocabulary learning through using glossary in reading comprehension texts and compares the effect of L1 and L2 word glossary on retention of technical vocabularies. Students can see the glossary and learn the meaning of unknown words while reading a text, but the research question is which glossary presentation (in L1 or in L2) has more effect on retention of technical vocabulary. The study aims to observe these effects.

Methodology

Subjects

The Subjects of the study were 40 Civil Engineering students of Engineering Technical University (Azad University), Chalooos branch that were selected by a placement test one week before administering main tests. The number of participants in the placement test was 60 and 40 students were selected among them. All of them were male with the same ability in English language.

Instruments

The used instruments in this study are 3 tests:

English Placement Test

English Placement test was used to select subjects with the same level of ability in English language teaching. The participants in this test were 60 students and finally 40 students were selected among them by comparison of their scores in this test. There were 100 items in this test. It was multiple choice test. This test was administered one week before the main tests (test 1 & test 2).

Test 1

There were 5 passages in this test with English word glossary for Civil Engineering Technical vocabularies. There were 30 multiple choices items in this test. The test included reading comprehension and vocabulary questions after each reading passage, there were the related questions. The considered time to answer the questions was 45 minutes.

Test 2

Test 2 was administered 15 minutes after test 1 and the same students participated in this test. Test 2 was just like test 1, but the only difference was in their glossary. In test 2, definitions in glossary were in Persian (L1). Test 2 also lasted 45 minutes.

Procedure

In order to test the research hypothesis, the study utilized the experimental paradigm by administering two tests. The design of this study is referred as the **pretest-posttest-control group design**. There was one group as both control and experimental group. In test 1, they are considered as control group and in test 2, they are considered as experimental group. It was hypothesized that the effect of L1 and L2 word glossary is similar on learning and retention of vocabulary.

At first, test 1 was administered. There were 5 reading passages with English word glossary for technical vocabularies. The vocabularies are typed italic in the reading passage. There were questions (including reading comprehension and vocabulary questions) after each reading passage. In vocabulary items, one vocabulary in glossary was omitted. Test 2 was just like test 1. The only difference was in their word glossary. There was English word glossary in test 1 and Persian word glossary in test 2. There were 30 questions in each test. Each test lasted 45 minutes and 40 students (the same group) were participated in two tests. This group was selected after administering the English placement test. The placement test was administered among 60 Civil Engineering students of Engineering Technical University (Azad University), Chalooos branch and 40 students were selected after comparison of their scores. There were 100 questions in placement test and 1 hour was considered to answer it. One week after administering the English placement test and selecting students, the main tests were administered.

Results

The analyzing the subjects' two test scores and comparison of them showed that students' scores in test 2 (The reading passages with L1 word glossary) was better than test 1 (The reading comprehension passages with L2 word glossary); therefore, the hypothesis of the study was rejected. The researcher concluded that L1 word glossary is more effective in learning and retention of technical vocabularies rather than L2 word glossary. Because the scores were determined out of 30, the researcher calculated them out of 20. The frequency of the tests scores have been presented in the following Tables:

Table 3.1: Students' scores & their frequency in Test 1 & Test 2

<i>Test 1</i>		<i>Test 2</i>	
<i>Score</i>	<i>Frequency</i>	<i>Score</i>	<i>Frequency</i>
29= 19.33	1	30= 20	3
28= 18.66	3	29= 19.33	7
27= 18	2	28= 18.66	3
26= 17.33	2	27= 18	3
25= 16.66	2	26= 17.33	6
24= 16	3	25= 16.66	1
23= 15.33	2	24= 16	1
22= 14.66	2	23= 15.33	4
20= 13.33	3	22= 14.66	3
18= 12	1	21= 14	2
17= 11.33	7	20= 13.33	1
16= 10.66	4	18= 12	1
15= 10	4	17= 11.33	2
14= 9.33	2	15= 10	1
13= 8.66	1	14= 9.33	1
11= 7.33	1	13= 8.66	1

Table 3.2. Differences between the scores of test 1 & test 2

<i>Test 1 Score</i>	<i>Test 2 Score</i>	<i>D (differences between two scores)</i>
1- 19.33	20	.67
2- 18.66	20	1.34
3- 18	20	2
4- 18	19.33	1.33
5- 17.33	19.33	2
6- 16.66	19.33	2.67
7- 16	18.66	2.66
8- 16	18	2
9- 15.33	19.33	4
10- 18.66	19.33	.67
11- 14.66	17.33	2.67
12- 14.66	18	3.34
13- 13.33	15.33	2
14- 13.33	14.66	1.33
15- 13.33	17.33	4
16- 11.33	18.66	7.33
17- 11.33	18.66	6
18- 11.33	18.66	7.33
19- 11.33	15.33	4

20- 10	15.33	5
21- 10	14	4
22- 10	16	6
23- 10	15.33	5.33
24- 10.66	14.66	4
25- 10.66	11.33	.67
26- 11.33	12	.67
27- 11.33	13.33	2
28- 11.33	19.33	8
29- 10.66	16.66	6
30- 10.66	11.33	.67
31- 12	14	2
32- 15.33	17.33	2
33- 16.66	14.66	2
34- 16	18	2
35- 18.66	17.33	1.33
36- 17.33	19.33	2
37- 9.33	17.33	8
38- 8.66	9.33	.67
39- 9.33	10	.67
40- 7.33	8.66	1.33

Table 3.3: The mean score and standard division of test 1 & test 2

<i>Category</i>	<i>Number of Subjects</i>	<i>Mean</i>	<i>Standard Deviation</i>
<i>Test 1</i>	40	13.2	2.35
<i>Test 2</i>	40	14.2	2.35

Match-t-test Formula

Match-t-test was used in this study because the same group participated in two tests. When formulating research hypothesis, the study researcher determined the level of significance (α) .05 and since degree of freedom (d.f.) is 39, t-critical is 1.697. Now the observed **t** value should be checked against the critical **t** value by regarding the degree of freedom. The results have been shown in Table 4.3.

Table 3.4: The Results obtained by Match-t-test

<i>Category</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Final</i>	<i>t- observed</i>	<i>t- critical</i>	<i>df</i>
Test 1	13.2	2.35	.35	2.85	1.697	39
Test 2	14.2	2.35	.35	2.85	1.697	39

As shown in the Table 4.3., the observed **t** value is **greater than** the critical **t** value. So, the difference between the means is said to be statistically significant and then treatment in test 2 is effective and then the hypothesis is rejected.

Discussion

Lexical competence recently has been identified to be the most significant predictor to general language ability. (Carter and Nunan, 2001); however, it is also identified by most learners to be one of the biggest challenges of language learning (Coady and Huckin, 1997).

Incidental learning has a sufficient role in leaning of new words. This kind of learning takes place by listening, reading. The study aimed to observe incidental vocabulary learning about technical vocabulary learning of Civil Engineering texts. Technical vocabularies of a certain field have important role in future success of that field. Students have many problems when they do not know technical vocabularies of their field of study.

The current study aimed to observe the effect of incidental vocabulary learning through reading on learning and retention of technical vocabularies. In this study, reading texts were equipped with glossaries in L1 and L2. The glossaries are summarized definitions of vocabularies. Glossaries are effective to cope with authentic texts and they have been considered the means to facilitate reading comprehension by providing information both at the word, sentence and also topic level (Widdoson, 1984). The current study aimed to explorer which type of glossary (L1 and L2) is more effective on learning and retention of technical vocabularies of Civil Engineering and the hypothesis was considered that 'the effect of L1 and L2 word glossary is the same on learning and retention of technical vocabularies'.

The result of the study refused the considered hypothesis and showed that L1 word glossary (in this study, Persian language) is more effective rather than L2 word glossary on learning and retention of technical vocabularies. In test 2 that L1 word glossaries was used for technical vocabularies, the scores of test was better than test 1 that L2 word glossary was used.

It had been approved that word glossary is effective on incidental learning of vocabularies. Hulstijn, J. H. & Hollander, M. & Greidanus, T. (1996) by a study approved the effect of word glossaries on learning and retention of vocabularies. When students read a text and they do not know the meaning of some words, glossaries are the best mean to help them to know the meaning of the words rather than looking up them in dictionary or guessing them through context that may result in confusion or misguessing.

Conclusion

Descriptive static indicates that L1 word glossary has more effective role in learning and retention of technical vocabularies rather than L2 word glossary. In recent study first language was Persian and second language was English and technical vocabularies were Civil Engineering technical vocabularies. Subjects were 40 Civil Engineering students of Azad Noshahr-Chalous University that were selected by a placement test that was administered among 60 Civil Engineering students of this university. One week after the placement test, two tests administered. In test 1, the effect of L2 word glossary was observed. Test 2 was administered 15 minutes after test 1 and observed the effect of L1 word glossary. Both test1 and test 2 involved 5 reading comprehension passages with glossaries for technical vocabularies and the questions related to each reading passages followed it. They were reading comprehension and vocabulary questions and they were multiple choices. There were 30 questions in each test. Many of subjects gained high sores in test 2 with L1 word glossary and the hypothesis of the study that believed the effect of L1 and L2 word glossary is the same on learning and retention of technical vocabularies was refused.

References

Carter, R. & Nunan, D. (2001). *The Cambridge guide to teaching English to speakers of other languages*. Cambridge: Cambridge University Press.

Celce-Murcia, M. (1991). *Teaching English as a second or foreign language*. USA: NUBARY HOUSE.

Coady, J. & Huckin, T. (eds) (1997). *Second language vocabulary acquisition*. Cambridge: Cambridge University Press.

Hulstijn, J. H. & Hollander, M. & Greidanus, T. (1996). Incidental vocabulary learning by advanced foreign language students: The influence of marginal glosses, dictionary use, and reoccurrence of unknown words. *The Modern Language Journal*, Vol 80, No.3, 327-339. <http://links.jstor.org/>

Krashen, S. (1993). *The power of reading insights from research*. Englewood Co:Libraries Unlimited.

Krashen, S. (1993). *The power of reading insights from research*. Englewood Co:Libraries Unlimited.

Krashen, S. (1993). *The power of reading insights from research*. Englewood Co:Libraries Unlimited.

Lomika, Lara L. (1998). To gloss or not to gloss: An investigation of reading comprehension online. Received at 2006/07/10. <http://lt.msu.edu/vol1num2/article2/default.html>

Widdowson, H. G. (1984). *Teaching language as communication*. Oxford: Oxford University Press