Vocabulary learning and learners' ability to transfer their knowledge into L2 reading comprehension: A case for translation

Ali Jahangard
Assistant Professor, Sharif University of Technology
Ahmad Moinzadeh
Assistant Professor, Isfahan University
Mansoor Tavakoli
Assistant Professor, Isfahan University

Abstract

The purpose of the study was to investigate whether the students who learn their lexical knowledge through translation method are able to transfer the knowledge into reading comprehension .The study consisted of four steps, namely, reading pre-test, lexical instruction, vocabulary testing, and reading post-test. The results showed a significant improvement in the reading scores of the learners in Grade One and Two after the vocabulary instruction treatments were introduced. The results indicated that low-proficiency (Novice-Mid and Novice-High) were able to transfer their lexical knowledge learned through decontextualized translation equivalent teaching method into reading comprehension tasks. The apparent discrepancy between the findings of the present study and that of Prince (1996) is also discussed with reference to "task-induced involvement load hypothesis".

Keywords: vocabulary learning, reading comprehension, explicit and implicit learning, translation list learning, paired-associate paradigm, task-induced involvement load hypothesis

1. Introduction

There has been an extensive amount of research on second language vocabulary acquisition in the recent years (Lewis, 1997; Sinclair, 1991). Considering the research testifying to the lexical nature of much of language processing in reading (de Bot, Paribakht, & Wesche, 1997; Laufer, 1997a), and writing (Laufer & Nation, 1995) this direction in the current of the recent research seems reasonable. According to Hunt and Belgar (2005, p. 24) "…… the heart of language comprehension and use is the lexicon, and that Widdowson's (1989, p. 136) call "...to shift grammar from its preeminence and to allow the rightful claims of lexis" has yet to be on the researchers' working agendas".

Foreign language teachers at the Iranian high school context face several limitations that are worthy of mentioning here. These limitations can be summarily classified into three broad categories:

- Time pressure
- Mandated national curriculum
- Mandated testing schemes

The time allocated to the language program in the national curriculum seems to be unjustified because the volume of the syllabus to be covered in an academic year does not match the time span which is available for it to be implemented. For example, Book One which is prescribed for the grade one of the high schools consists of nine lessons, each including thirty new lexis on average, at least two new syntactic structures, a reading passage of about 800 words, a dialogue, pronunciation practice and three to four pages of drills and various types of exercises. It is interesting to note that the time allocated to this much work is only one and a half class hour(about two hours and fifteen minutes) per week. The class time is supposed to be ninety minutes where, in fact, it amounts to seventy minutes in most of the classes. In practice, every three weeks, one lesson must be finished to keep up with the time table of the school program. It is also worthy of note that about two months of the academic year is spent on taking the midterm and final exams which are regularly administered by the central offices of the Ministry of Education.

This problem extends to other grades as well. Only one class per week for the Second grade and Third grade and two classes per week for the Fourth grade are allocated to EFL teaching in the school program. Because

of this imbalance between the workload of the syllabus and the allocated time for its implementation, teachers are always lagging behind the time table of the schools and thus are unable to get their students into complementary activities such as extensive reading which is one of the major means of implicit lexical instruction.

The second limitation concerns the mandated codes and regulations which are imposed on the teachers by the central offices. According to these directives, teachers are not permitted to teach any other books except those which are prescribed by the Ministry of Education.

The third of these limitations is the mandated schemes of testing. The teachers are sent typical standard formats of tests according to which they must design their locally administered tests. The test developers are not allowed to change the format and the weight given to different sections of the tests. According to these directives, teachers are not allowed to include even a single word which is not included in the books. This has got certain negative ramifications across the curriculum. Teachers are inhibited from utilizing complementary materials such as level readers, simplified short stories, or even other more popular textbooks available in the market. Students would find it in vain studying and reading materials that are not going to be included in the exams whose results are considered to be more important than the learning itself for their families and the officials of the schools. This problem becomes more perverse in the Third Grade because not only the format but also the content of the final exams are determined by the central offices.

Thus, the teachers, whose right to choose their own preferred books and teaching materials and to design their own tests are denied in the Iranian educational system, have no other alternatives at their disposal to choose from other than getting recourse to explicit methods of lexical instruction one of which is "*paired associate*" learning.

One of the most frequently used strategies in explicit vocabulary teaching/learning is list learning in which a series of words are presented with their translation equivalents in the learners' mother tongue also referred to as "paired associates" . Vocabulary lists can be an effective way to quickly learn word-pair translations (Nation, 1990).

However, Prince (1996) states that simply knowing translations for L2 words does not "guarantee that they will be successfully accessed for use in an L2 context" (p. 488). As is evident from the short literature discussed

above, there is a state of indeterminacy as to the learners' ability to transfer the lexical knowledge which is mainly acquired through translation learning. Thus, in the present research we tried to investigate the question of whether the Iranian EFL learners who receive their lexical instruction mainly through translation learning are able to transfer their lexical knowledge acquired as such to L2 contexts of reading comprehension or not.

2. Background

The research by Crothers and Suppes (1967) revealed that seven repetitions were sufficient for learners to master 108 new Russian-English word pairs and that 80 per cent of a further 216 word pairs were learned by most of the control group of learners after only *six repetitions* [emphasis is ours].

Lotto and De Groot (1998) examined the roles of learning method (translation vs. picture), word frequency, and cognate status. During the learning phase of the experiment, 80 L2 words were presented in three rounds, with either their L1 translation or a picture. During the test, which measured productive L2 vocabulary knowledge, either the pictures or the L1 translations constituted the cues for recall of the L2 words. The results showed that the translation learning condition resulted in better recall performance than the picture condition, and cognates and high-frequency words were easier to learn than non-cognates and low-frequency words (see also Ellis & Beaton, 1993).

Kroll, Michael, and Sankaranarayanan (1998) investigated L2 vocabulary learning under conditions differing in the allowance of L1 word mediation and concept mediation. The results show that even when semantic (pictorial) information is salient, learners are likely to rely on mediation via L1.

Hayati and Mohammadi (2009) investigated the usefulness of task-based activities versus translation for incidental learning of vocabulary. Results of their study demonstrated better results for the group who was involved in the translation activity. They conclude that, "Overall, the study revealed that in EFL contexts, using translation in a communicative framework enhances vocabulary learning at deeper levels of cognitive

processing leading to deeper vocabulary gains for unknown words." (p. 153).

Mehrpour (2008) compared the impacts of two vocabulary teaching techniques (contextualized vs. decontextualized) on vocabulary learning of a low proficiency group of Iranian EFL learners. He concludes that rote memorization of word-lists can work better than sentence-making practice, which is of especial relevance to Iranian learners of English at low levels of proficiency.

But, before we continue, it seems necessary to define lexical knowledge which is a multi-faceted concept with controversial definitions among the scholars of the field. Although knowing words is a fairly subjective concept that depends on the learner's purposes, standards, situation (extensive reading, testing, active usage etc.), teacher or tester's requirements and so on (see Grabe & Stoller, 1997; Paribakht & Wesche, 1997), in the current research, word, lexical, or vocabulary (used interchangeably) knowledge is defined as the learners' ability to produce the appropriate phonetic, orthographic, syntactic, and semantic features of the L2 associates of the words presented in their L1.

3. Purpose of the Study

In the present research an attempt was made at investigating the question of whether the Iranian EFL learners who receive their lexical instruction mainly through translation learning are able to transfer their lexical knowledge acquired as such to L2 contexts of reading comprehension.

4. Methodology

4.1 Participants

Totally, 164 learners, all female and aging 16 to 19, studying EFL in Grades One and Two at Razieh Public high school in Karaj, Tehran, participated in the study. The participants were further assigned into two independent control and experimental groups in each one of the high school Grades. 104 of the subjects in Grade One, were divided into two independent control and experimental groups, each consisting 52 subjects. 60 subjects in Grade Two of the high school participated in the study. They were also assigned into two independent control and experimental groups. In addition, for purposes of comparability, the participants' reading ability

Vocabulary learning and learners' ability…

participating in the study in Grades One and Two were estimated by the researchers and other experienced teachers to match the Novice-Mid and Novice-High levels, respectively, in terms of the ACTFL proficiency guidelines (1998).

4.2 Instruments

The materials used in the study included two reading passages from Hill (1980a, p.6) and Hill (1980b, p.26). Two vocabulary tests based on the instructed lexical items in the experiments, and two batteries of multiple-choice translation test based on the content of the passages were developed and prepared for the study.

In order for the passages to be of roughly the same text difficulty as the passages included in the EFL text books of the learners, Fog's Readability formula (see Farhady, Jafarpoor, & Birjandi, 1998, p.82) was used. The readability indexes found for the EFL text book passages were approximately 18 and 22 for Grade One and Grade Two text books, respectively. Thus, these ranges of readability indexes were the criteria against which the selection of the reading passages employed in the study were made.

To obtain the validity indexes for the two multiple-choice translation tests utilized in the study to measure the extent of the reading comprehension of the passages by the learners, two parallel multiple-choice tests, one in the conventional format and one in the multiple-choice translation format were developed and administered. An exemplary *multiple-choice translation* test item was as follows:
*"An old lady went out shopping last Tuesday."
 The closest translation of the sentence is:

a) دختر خانمی برای خرید لوازم جشن سه شنبه گذشته بیرون رفت.

b) خانم مسنّی سه شنبه گذشته برای خرید بیرون رفت.

c) خانم مسنّی سه شنبه آخر سال برای خرید به فروشگاه رفت.

d) خانم جوانی سه شنبه گذشته برای تفریح بیرون رفت.

An exemplary *conventional multiple-choice* test item used in the parallel reading comprehension test goes as follows:
*According to the story in the passage, ……………………… .

a) somebody stole the man's car.

      b) the old lady robbed the bank.

      c) the man stole the money from the bank

      d) the man couldn't get any money.

    The correlation coefficients (Cronbach *alpha*) found between the translation test scores and the conventional multiple-choice test scores were .70 and .74 in Grade One and Grade Two, respectively.

    The vocabulary tests were in fact a list of the L1 translation equivalents of the entire instructed lexical items in the experiments given in an isolated context for which the learners were required to provide the following features for every single one of the words: the orthographic, phonological (for matters of convenience and time pressure, the learners were allowed to write the pronunciation of the given words in their L1, i.e. Persian-transcript), syntactic (grammatical category, number and tense), the evidence for the syntactic knowledge concerning each word, was induced from the syntactic properties of the equivalent translation of the words provided by the learners, and semantic. For the scoring of the tests, ¼ point was assigned to every one of the features of the words totaling to 1 point per word. It is worthy of note that the vocabulary tests were treated as criterion-referenced measures. According to Bachman, 1990, p.210), "In the criterion-referenced interpretation of the test scores, on the other hand, an individual's ability is defined not in terms of the average performance of a group of individuals, *but in terms of his successful completion of tasks from a set or domain of criterion tasks* [emphasis is ours] , or his performance with reference to a criterion level that defines the ability in question." Consequently, Livingston's 1972 agreement index (cited in Bachman, 1990, p. 218) was employed to calculate the reliability of the vocabulary tests. The indexes obtained were moderate due to the low variation in the test scores. The summary of the important statistics of the measures utilized in the study are presented in the table below.

Vocabulary learning and learners' ability…

Table 1: The descriptive statistics for the measures of the study

Tests	N	Mean	Max. Possible Score	SD	Reliability/dependability
Reading Pretest Grade 1	23	9.61	23	6.96	0.79
Reading Posttest Grade1	23	17.27	23	6.19	0.79
Vocabulary Test Grade 1	15	13.86	15	2.55	0.47
Reading Pretest Grade2	15	6.32	15	3.79	0.72
Reading Posttest Grade2	15	12.25	15	1.89	0.72
Vocabulary Test Grade2	20	17.25	20	2.53	0.66

4.3 Procedures

The study consisted of four steps, namely, reading pre-test, lexical instruction, vocabulary testing, and reading post-test. In the pre-test step of the study, the passages were presented to the learners where they were required to read and answer the related multiple-choice translation comprehension questions without the unknown lexis being clarified. In the meantime, the learners were also told to mark the unfamiliar words they encountered in the passages. These unknown words made up the early draft of the vocabulary list to be practiced later in the second step of the research. Later, the researchers modified the list based on the teacher/researchers' judgment as to which items are known or unknown to the learners.

In the second step, i.e., lexical instruction step of the study, the translation of the lexical items gathered in the previous step, were supplied by the instructors along with the pronunciation of the given words. After clarifying all the unknown words in the passage, the learners were required to practice them by writing and orally repeating every one of the words six times along with their translation equivalents until all the new words were

fully rehearsed. [The rationale for 6 repetitions was the researches by Crothers and Suppes (1967) and Rott (1999)].

Then, in the third step of the study the vocabulary tests were used to assess the extent the learners have learned the newly presented lexis. The procedures for the vocabulary test development were as follow: all the lexical items which were taught to the learners constituted the content of the vocabulary tests. The learners were required to provide the L2 equivalents of the L1 translations of the target L2 words. The reason for forward translation, i.e. from L1 to L2 was that research has shown that response learning is more difficult than stimulus learning (Schneider & Healy & Bourne, 2002). Every word has certain specific features such as syntactic, semantic, orthographic, phonetic, and collocational. In the present study, however, four of these features, namely, semantic, orthographic, syntactic, and the phonological features were taken into account both in the instruction and the testing of the learners' knowledge of the lexical items. It is worthy of mention that one of the strong points of the present study which makes it unique is the inclusion of more than two features of a word into its design.

Lastly, in the fourth step of the experiment the reading post-tests which were the same passages, utilized as the pre-test and of which the unknown words were extracted and practiced by the learners, were administered. The schematic design of the study is shown in the table below:

Table 2: The design of the study

Experimental Group Grade 1	Reading Pretest	Lexical Instruction	Reading Posttest
Control Group Grade 1	Reading Pretest		Reading Posttest
Experimental Group Grade 2	Reading Pretest	Lexical Instruction	Reading Posttest
Control Group Grade 2	Reading Pretest		Reading Posttest

Vocabulary learning and learners' ability…

4.4 Data Analysis

For the purpose of data analysis, univariate analysis of variance procedure under SPSS 13 was used. This procedure was employed because it could provide us with the effect size of the factors included in the study and also it could make comparisons of the group means possible.

5. Results

5.1 Grade One Students

The statistical results of the study for Grade One students are presented below:

Table 3: The descriptive statistics of Grade One students

	N	Maximum Possible Score	Mean	Std. Deviation
Experimental Group Reading Pre-test	52	23	9.67	6.91
Experimental Group Reading Post-test	51	23	17.27	6.19
Experimental Group Vocab. Test	52	15	13.37	2.55
Control Group Reading Pre-test	52	23	10.01	6.80
Control Group Reading Post-test	52	23	10.75	7.14
Valid N (listwise)	51			

Table 3 demonstrates the descriptive statistics of the learners in Grade One who participated in the study. As is evident, there are no considerable differences between the means of the control groups on the pre and post tests. On the contrary, there is a large difference between the experimental and the control groups Means on the pre and post tests.

Jahangard, Moinzadeh, and Tavakoli

Taking the unequal number of the cases in the groups under study into account, under the 'model' option of the procedure 'main effect' was used through type IV sum of squares. For the comparison of the main effects, Bonferroni test was used for the adjustment of the confidence interval. This choice was selected because we had repeated measures of reading comprehension in each one of the experimental and control groups, i.e., every subject had taken the reading comprehension twice, once in the pretest and once in the posttest.

The results of the pair-wise comparisons of the means are shown in Table 4. The Mean Difference between the pre and post tests in the experimental group is 7.60 which is absolutely significant. On the other side, the Mean Difference for the pre and post tests in the control group is 0.73 which is not significant. Comparison of the Means in the control and the experimental groups on the pre tests shows that the difference, 0.34, is not statistically significant.

Table 4: Pair-wise comparisons of the experimental and control groups means on the pretests and posttests

(I) G	(J) G	Mean Difference (I-J)	Standard Error	Sig.[a] (two-tailed)
Experimental Pre-test	Experimental Post-test	[*]7.601-	1.336	000.
	Control Pre-test	346.-	1.329	1.000
	Control Post-test	1.077-	1.329	1.000
Experimental Post-test	Experimental Pre-test	[*]7.601	1.336	000.
	Control Pre-test	[*]7.255	1.336	000.
	Control Post-test	[*]6.525	1.336	000.
Control Pre-test	Experimental Pre-test	346.	1.329	1.000

Vocabulary learning and learners' ability…

	Experimental Post-test	*7.255	1.336	000.
	Control Post-test	731.-	1.329	1.000
Control Post-test	Experimental Pre-test	1.077	1.329	1.000
	Experimental Post-test	*6.255-	1.336	000.
	Control Pre-test	731.	1.329	1.000

Based on estimated marginal means
*. The mean difference is significant at .05 level
a. Adjustment for multiple comparisons : Bonferroni

The parameter estimates in Table 5 show the effects of each group on the outcomes. The partial eta squared statistic reports the "practical" significance of each term, based upon the ratio of the variation (sum of squares) accounted for by the term, to the sum of the variation accounted for by the term and the variation left to error. Larger values of partial eta squared indicate a greater amount of variation accounted for by the model term, to a maximum of 1. Here, the partial eta value of group 2 is 0.620, indicating that it has the largest effect on the value of reading comprehension of all the other groups in Grade One and also 62% of the variation in the scores is accounted for by the vocabulary learning.

Table 5: Parameter estimates of the effect size of each group on the reading comprehension scores

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
					Lower Bound	Upper Bound	
Group 1	9.673	9.40	10.293	. 000	7.820	11.526	343.

Jahangard, Moinzadeh, and Tavakoli

Group 2	17.275	9.49	18.204	. 000	15.404	19.146	620.
Group 3	10.019	9.40	10.662	. 000	8.166	11.872	359.
Group 4	10.750	9.40	11.439	. 000	8.897	12.603	392.

Dependent variable: Reading comprehension
Group 1: Experimental pretest, Group 2: Experimental posttest, Group 3: Control pretest,
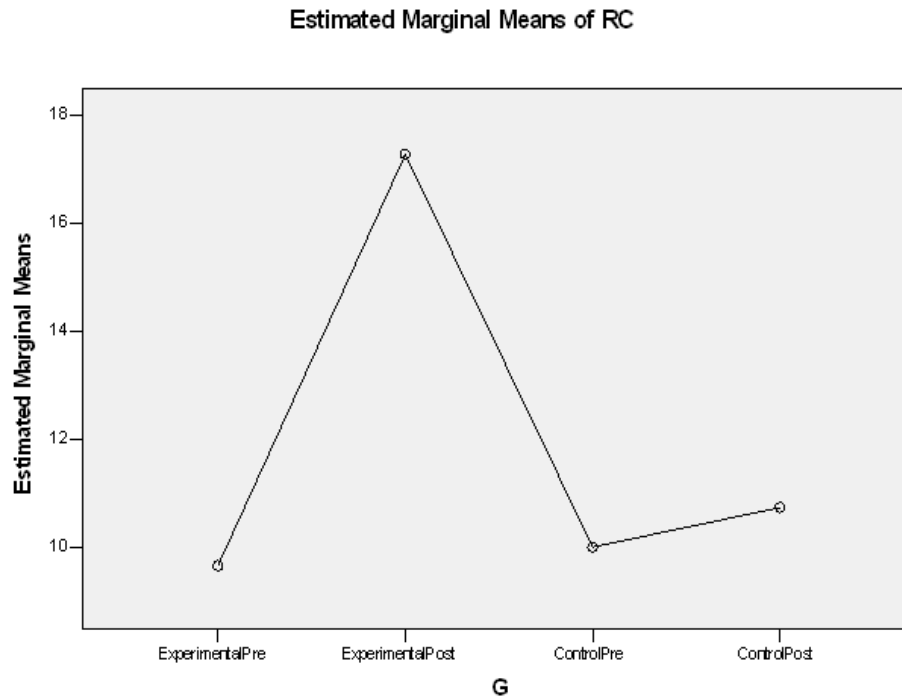Group 4: Control posttest.

Table 6 shows that there is a high correlation (r =.84) in Grade One between the learners' vocabulary scores and the reading scores on the post-tests. This probably means that those who have been more efficient vocabulary learners have also been relatively more proficient readers.

Table 6: Correlation between the vocabulary test and the reading post-test in Grade One

		Vocab. Test Grade1	Posttest Reading Grade1
Vocabulary Test Grade1	Pearson Correlation	1	.848(**)
	Sig. (2-tailed)		.000
	N	52	51
Post-test Reading Grade1	Pearson Correlation	.848(**)	1
	Sig. (2-tailed)	.000	
	N	51	51

** Correlation is significant at the 0.01 level (2-tailed).

As Figure 1 shows, there is a marked increase after the vocabulary instruction is introduced between the pretest and posttest in the experimental group.

Vocabulary learning and learners' ability…

Estimated Marginal Means of RC

Figure 1: Profile plot of the reading comprehension scores of Grade One students on the pre and post Test in the experimental and control groups.

5.2 Grade Two Students

Table 7 demonstrates the descriptive statistics of the learners in Grade Two who participated in the study. As is evident, there are no considerable differences between the means of the control groups on the pre and post tests in both of the Grades. On the contrary, there is a large difference between the experimental and the control groups Means on the pre and post tests.

Table 7: The descriptive statistics of Grade Two students

	N	Maximum Possible Score	Mean	Std. Deviation
Experimental Group Reading Pre-test	30	15	6.13	3.73
Experimental Group Reading Post-test	28	15	12.25	1.89
Control Group Reading Pre-test	30	15	6.23	3.59
Control Group Reading Post-test	30	15	6.53	3.42
Experimental Group Vocab. Test	28	20	17.25	2.53
(listwise)Valid N	28			

Taking the unequal number of the cases in the groups under study into account, under the 'model' option of the procedure 'main effect' was used through type IV sum of squares. For the comparison of the main effects, Bonferroni test was used for the adjustment of the confidence interval. This choice was selected because we had repeated measures of reading comprehension in each one of the experimental and control groups.

The results of the pair-wise comparisons of the means in Grade Two are shown in Table 8. The Mean Difference between the pre and post tests in the experimental group is 6.11 which is absolutely significant. On the other side, the Mean Difference for the pre and post tests in the control group is 0.3 which is not significant. Comparison of the Means in the control and the experimental groups on the pre tests shows that the difference, 0.1, is not statistically significant.

Vocabulary learning and learners' ability…

Table 8: Pair-wise comparisons of the experimental and control groups means on the pretests and posttests

(I) G	(J) G	Mean Difference (I-J)	Standard Error	Sig.[a] (two-tailed)
Experimental Pre-test	Experimental Post-test	*6.117-	858.	000.
	Control Pre-test	100.-	843.	1.000
	Control Post-test	400.-	843.	1.000
Experimental Post-test	Experimental Pre-test	*6.117	858.	000.
	Control Pre-test	*6.017	858.	000.
	Control Post-test	*5.717	858.	000.
Control Pre-test	Experimental Pre-test	100.	843.	1.000
	Experimental Post-test	*6.017-	858.	000.
	Control Post-test	300.-	843.	1.000
Control Post-test	Experimental Pre-test	400.	843.	1.000
	Experimental Post-test	*5.717-	858.	000.
	Control Pre-test	300.	843.	1.000

Based on estimated marginal means
*. The mean difference is significant at .05 level
a. Adjustment for multiple comparisons: Bonferroni

The parameter estimates in Table 9 show the effects of each group on the outcomes. The partial eta squared statistic reports the "practical"

significance of each term, based upon the ratio of the variation (sum of squares) accounted for by the term, to the sum of the variation accounted for by the term and the variation left to error. Here, the partial eta value of group 2 is 0.776, indicating that it has the largest effect on the value of reading comprehension in comparison with other groups of the study.

Table 9: Parameter estimates of the experimental and control groups effects on the pre and post tests in Grade Two

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
					Lower Bound	Upper Bound	
Group 1	6.133	596.	10.288	.000	4.952	7.314	481.
Group 2	12.250	617.	19.851	.000	11.028	13.472	776.
Group 3	6.233	596.	10.456	.000	5.052	7.414	490.
Group 4	6.533	596.	10.959	.000	5.352	7.414	513.

Dependent variable: Reading comprehension
Group 1: Experimental pretest, Group 2: Experimental posttest, Group 3: Control pretest, Group 4: Control posttest.

Table 10 shows that there is a high correlation (r = 87) in Grade Two between the learners' vocabulary scores and the reading scores on the post-tests. This means that those who have been more efficient vocabulary learners have also proved to be relatively more competent on the reading comprehension tests.

Vocabulary learning and learners' ability…

 Table 10: Correlation between vocabulary test and reading post-test in Grade Two

		Posttest Reading Grade2	Vocab. test Grade2
Posttest Reading Grade2	Pearson Correlation	1	.872(**)
	Sig. (2-tailed)		.000
	N	28	28
Vocab. Test Grade2	Pearson Correlation	.872(**)	1
	Sig. (2-tailed)	.000	
	N	28	28

** Correlation is significant at the 0.01 level (2-tailed).

As Figure 2 shows, there is a marked increase after the vocabulary instruction is introduced between the pretest and posttest in the experimental group.

Jahangard, Moinzadeh, and Tavakoli

Estimated Marginal Means of RC
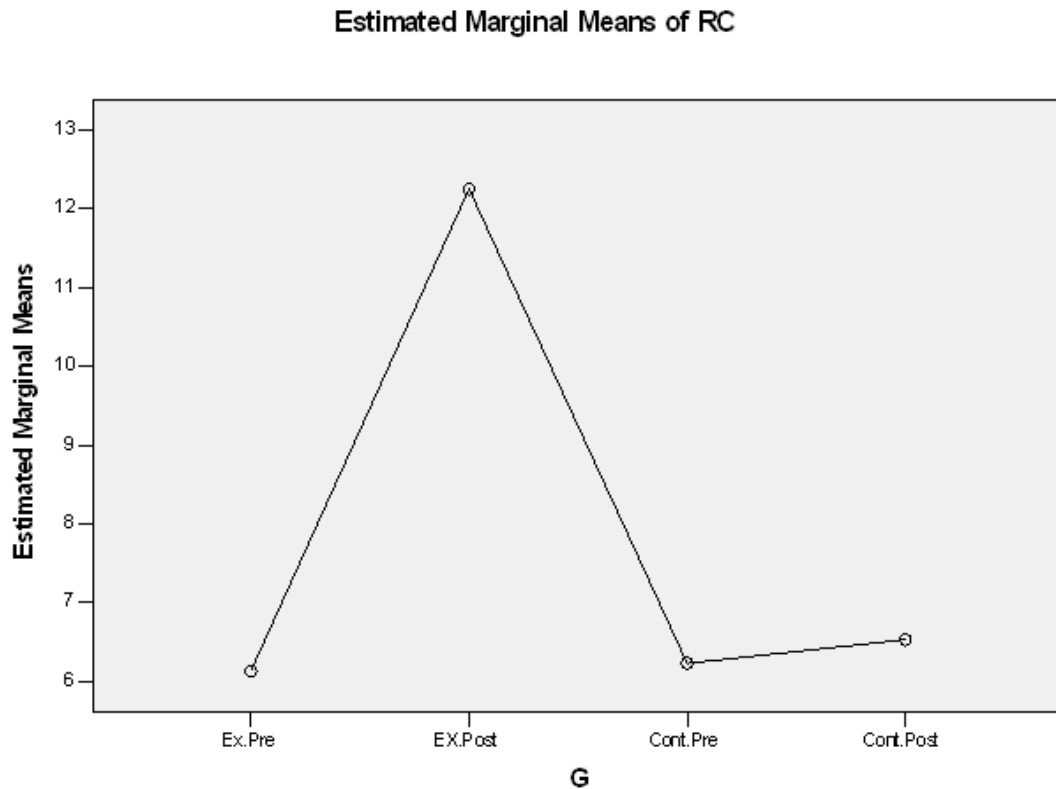
Figure 2: Profile plot of the reading comprehension scores of Grade One students on the pre and post test in the experimental and control groups.

6. Discussion

The results and the related data-analysis concerning the questions posed in the *Purpose of the Study* section demonstrated that the learners in both high school Grades – i.e. Grade One and Grade Two – were able to transfer their lexical knowledge acquired through the translation learning. The effect sizes of the vocabulary instruction in Grade One (Novice-Mid) and Grade Two (Novice-High) learners show that the lexical knowledge

Vocabulary learning and learners' ability…

which is gained through translation learning can be transferred to reading comprehension tasks.

The results also showed that the control and the experimental groups in both Grades were roughly the same in terms of performance on the reading tests before the translation learning treatments were introduced.

Insignificant differences between the Means of the control groups on the related pretests and posttests showed that reading a text twice, i.e., repeated test effect, had no significant impact on the outcomes. This might be interpreted in two ways: One is that the students did not expect to improve their understanding without the unknown words being clarified and, therefore, they did not take posttest so seriously. The other interpretation is that although multiple readings of a text might be helpful in gaining a clearer general understanding of the text through the activation of the related mental resources, it may have little effect on the readers decoding of the minute and text specific information which is encrypted into the lexical items which constitute it.

Large partial eta squares of the groups who participated in the translation learning and also strong correlation of reading comprehension scores and the vocabulary scores indicate that the learners were able to transfer their vocabulary knowledge of the newly learnt words which were acquired mainly through translation learning to reading comprehension context of use. However, it is worthy of notice that the magnitudes of both partial eta squares and also the correlation coefficients between the vocabulary tests and the reading tests were larger for the learners in Grade Two who were more proficient than their counterparts in Grade One. A possible interpretation is that more proficient learners were more able to transfer their newly learnt word knowledge to reading comprehension than the less proficient learners in the study. This, in turn, implies that proficiency might have a moderator role in the processes involved in the transfer of word knowledge to actual uses.

Strong correlations between the vocabulary scores and the reading scores re-confirm the pre-established finding that there is a robust relationship between reading comprehension and vocabulary knowledge.

However, there seems to be some sort of discrepancy between the finding of the present study as to the low proficiency learner's ability to transfer their word knowledge to reading comprehension context of use, and those of Prince (1996, p.478) as saying, "Results reveal a superiority

Jahangard, Moinzadeh, and Tavakoli

of translation learning in terms of quantity but an *inability* [emphasis is ours] on the part of weaker learners to transfer their knowledge into L2 contexts." The observed inconsistency here might be due to a multitude of factors such as the differences in the measurement tools, proficiency level of the learners, operational definition of learning, motivational factors in driving the learners to try their best and so forth.   Three of these differences and their possible effects on the results of the two comparable studies in question are, therefore, discussed below:

1. A possible source of the observed inconsistency between the results of the two studies might reside in the learning tasks required of the learners in the current study and the tasks required of the learners in Prince's experiments. The task requirements of the two studies in question can be analyzed with reference to the 'Task-induced Involvement Load Hypothesis' (TILH) proposed by Laufer and Hulstijn (2001). Although the framework was originally designed to explain incidental vocabulary learning, it can be employed to explain explicit vocabulary learning as well.   The TILH decomposes the mental processes involved in vocabulary learning into three cognitive components (search, evaluation) and a motivational (need) component. The cognitive components which , in essence, boil down to the length and duration of the processing time, as well as the type and number of synopses made between the new word and the existing lexical representations, can be taken as the counterpart of the term 'elaboration' adopted by other psychologists (see Anderson, 1995; Baddeley, 1997). The cognitive task factors involved in the studies in question might have been different. The cognitive load factor of the TILH in Prince's research might have been relatively less in magnitude than that of the present study. In the current study an attempt was made to include more lexical features into the tasks, thereby, adding to the cognitive load of learning. We added the phonological and syntactic features which were absent in Prince's study to other additional couple of features, namely, orthographic and semantic. Moreover, the forward (L1→L2) direction of translation, which was found to be more effective for retention (Schneider et al., 2002) than the backward (L2→L1) one, was adopted for prompting in the present study.

2. Within the same framework of TILH, the task factor 'need' can be assigned a 'strong' value in the present study because the

Vocabulary learning and learners' ability…

researcher/teacher promised the learners that the results of the tests would be taken into account in their course evaluation reports which were prepared bimonthly by the teachers. We are not sure how much the motivational intensities driving the completion of the tasks by the learners in the two studies were, in essence, similar. One possible justification for the mixed results might be the different 'need' factors felt by the learners in the two studies.

3. The researchers in the present study attempted to design the study in a way that the learning task and the testing task requirements had an almost common base in terms of the cognitive processes they invoked. To meet this end, we employed the multiple-choice translation test method considering the fact that the learners had learned the lexical items through L1 to L2 translation. However, Prince's subjects had to make use of the L2 words, learned through translation lists, in rather dissimilar L2 modes of use such as speaking or listening and this might have hampered access to the mental representation of the words whose semantic features were mostly mediated by their L1. The incongruence of the learning task and the testing task might have been a factor, among others, hindering the learners from transferring their newly acquired lexical knowledge into contexts of use in Prince's study. However, to resolve the state of indeterminacy regarding the mixed results of these two studies, more rigorous research is necessary.

7. Conclusion

The results of the study indicated that if the involvement load of lexical learning is heightened to an optimal degree, low proficiency learners will be able to transfer their lexical knowledge acquired through translation learning to reading comprehension tasks.

Psycholinguistic studies by Jiang (2002) and Sunderman and Kroll (2006) demonstrate that L1 is simultaneously active during L2 lexical processing in learners notwithstanding their proficiency levels. Although it is quite unfashionable to use L1 in learning and teaching an L2 nowadays, maybe as a result of the remains of the behavioristic psychology and the audio-lingual method once prevailing the field, given the omnipresent nature of L1 influence, it seems perfectly logical to take the most use of it

when it is beneficial to us. The area where there seems to be an evident advantage is creating the early form–meaning link.

The use of translation in L2 teaching in general- and vocabulary teaching in particular- has been a polemic issue among many local EFL teachers and even prominent scholars of the field (e.g. see Widdowson, 2003, pp. 149-164). In addition, some scholars have expressed doubts concerning the learners' ability in using the knowledge acquired as such in L2 contexts of use. The findings of the present study corroborate the idea that all the mental resources and potentials (one of which is L1) must be harnessed to cope with the gigantic task of second language learning. In addition, they provide empirical evidence which can contribute to the assuagement of the uncertainties regarding the transferability of the knowledge gained through translation learning.

However, the present study was limited to the Grade One (Novice-Mid) and Grade Two (Novice-High) subjects and also limited only to reading comprehension task. To come to more generalizable results, we need to do further research to answer the following questions: a) Is there a proficiency threshold level for the L2 learners to develop the ability to transfer the lexical knowledge learned through translation to other language use contexts? b) The current study was limited to reading comprehension tasks, what about the other ones, such as listening comprehension, speaking, and writing? c) What if the learning context is different from the use context, e.g., learning the translation of the given words but answering the comprehension questions exclusively in L2 without recourse to translation, will the learners be able to transfer their lexical knowledge then?

References

ACTFL (American Council on the Teaching on Foreign Languages) 1998: *Proficiency guidelines*. SIL International. Retrieved from http://www.sil.org/lingualinks/languagelearning/OtherResources/ACT F ProficiencyGuidelines/contents.htm

Anderson, J. R. (1995). *Cognitive psychology and its implications* (4th edition.). New York: Freeman.

Bachman, L. F. (1990). *Fundamental considerations in language testing*. Oxford: Oxford University Press.

Baddeley, A. (1997). *Human memory: Theory and practice* (revised edition). Hove: Psychology Press.

Crothers, E., & Suppes, P. (1967). *Experiments in second language learning*. New York: Academic Press

de Bot, K., Paribakht, T. S., & Wesche, M. B. (1997). Toward a lexical processing model for the study of second language vocabulary acquisition. *Studies in Second Language Acquisition, 19*(2), 309-329.

Ellis, N. & Beaton, A. (1993). Psycholinguistic determinants of foreign language vocabulary   learning. *Language Learning*, *43*(4), 559-617.

Ellis, N. C. (1994a). Vocabulary acquisition: The implicit ins and outs of explicit cognitive mediation. In N. C. Ellis (Ed.), *Implicit and explicit learning of languages* (pp. 211-282). London: Academic Press.

Farhady, H., Jafarpoor, A., & Birjandi, P. (1994). *Language skills testing: From theory to practice*. Tehran, Iran: SAMT Publications.

Grabe, W., & Stoller, F. L. (1997). Reading and vocabulary development in a second language: A case study. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition* (pp. 98-122)*.* Cambridge: Cambridge University Press.

Hayati, A. M., & Mohammadi, M. (2009). Task-based instruction vs. translation method in teaching vocabulary: The case of Iranian secondary school students. *Iranian Journal of Language Studies, 3*(2), 153-176.

Hill, A. L. (1980a). *Introductory steps to understanding*. Oxford: Oxford University Press.

Hill, A. L. (1980b). *Intermediate steps to understanding*. Oxford: Oxford University Press.

Hunt, A., & Belgar, D. (2005). A framework for developing EFL reading vocabulary. *Reading n a Foreign Language, 17*(1), 23-59

Jiang, N. (2002). Form-meaning mapping in vocabulary acquisition in a second language. *Studies in Second Language Acquisition, 24*(4), 617-637.

Kroll, J. F., Michael, E., and Sankaranarayanan, A. (1998). A model of bilingual representation and its implications for second language acquisition. In A. F. Healy & L.E. Bourne, Jr. (Eds.), *Foreign language learning: Psycholinguistic studies on training and retention* (pp. 365-95). Mahwah, NJ: Lawrence Erlbaum Associates.

Laufer, B. (1997a). The lexical plight in second language reading: Words you don't know, words you think you know and words you can't guess. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition* (pp. 20-34). New York: Cambridge University Press.

Laufer, B., & Hulstijn, J. (2001). Incidental vocabulary acquisition in a second language: The construct of task-induced involvement. *Applied Linguistics, 22*(1), 1-26.

Laufer, B., & Nation, P. (1995). Vocabulary size and use: Lexical richness in L2 written production. *Applied Linguistics, 16*(3), 307-322.

Lewis, M. (1997). *Implementing the lexical approach.* Hove: Language Teaching Publications.

Lotto, L., & De Groot, A. M. B. (1998). Effects of learning method and word type on acquiring vocabulary in an unfamiliar language. *Language learning*, *48*(1), 31-69.

Mehrpour, S. (2008). A comparison of the effects of two vocabulary teaching techniques. *The Asian EFL Journal*, *10*(2), 192-208.

Nation, I. S. P. (1990). *Teaching and learning vocabulary.* New York: Newbury House.

Paribakht, T. S., & Wesche, M. (1997). Vocabulary enhancement activities and reading for meaning in second language vocabulary acquisition. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition* (pp. 174-200). Cambridge: Cambridge University Press.

Prince, P. (1996). Second language vocabulary learning: The role of context versus translations as a function of proficiency. *The Modern Language Journal, 80*(4), 478-493.

Vocabulary learning and learners' ability…

Rott, S. (1999). The effect of exposure frequency on intermediate language learners' incidental vocabulary acquisition through reading. *Studies in Second Language Acquisition, 21*(4)**,** 589-619.

Schneider, V. I., Healy, A. F., & Bourne, L. E., Jr. (2002). What is learned under difficult conditions is hard to forget: Contextual inference effects in foreign vocabulary acquisition, retention, and transfer. *Journal of Memory and Language, 46*(2), 419-   440.

Sinclair, J. (1991). *Corpus, concordance, collocation.* Oxford: Oxford University Press.

Sunderman, G., & Kroll, J. F. (2006). First language activation during second language lexical processing. *Studies in Second Language Acquisition, 28*(3), 387-422.

Widdowson, H. G. (1989). Knowledge of language and ability for use. *Applied Linguistics, 10*, 128-137.

Widdowson, H. G. (2003). *Defining issues in English language teaching.* Oxford: Oxford University Press.