Effects of Implicit Versus Explicit Vocabulary Instruction on Intermediate EFL Learners’ Vocabulary Knowledge

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ABSTRACT

The purpose of the present study was to investigate whether implicit instruction of vocabulary is more effective than explicit instruction. Also, it was of interest to the researchers to find out, between the two different methods of explicit instruction of vocabulary, which method was more useful in learning the meaning of the intended vocabulary. To this purpose, thirty five Iranian EFL learners participated in the three treatment sessions - implicit instruction, explicit instruction through giving marginal glossary and explicit instruction by checking words in dictionaries. The results showed that the difference among the mean scores of the three groups were statistically meaningful. The subjects with explicit instruction 1 and explicit instruction 2 performed better as compared with subjects who received implicit instruction. Between the two explicit methods of vocabulary instruction, checking words in the dictionary led to better learning of vocabulary as compared with giving marginal glossary. The results will be insightful for both teachers and material developers in designing appropriate materials and activities for teaching vocabulary.

Key words: Implicit instruction, explicit instruction, vocabulary knowledge

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1. Introduction

Vocabulary is an important aspect of the second language learning process. Numerous studies have revealed that the English language proficiency of second language learners in great measure, correlates with their vocabulary learning (Kojic-Sabo & Lightbown, 1999). Hence, learning a second language largely means learning its vocabulary (Gass, 1999) as vocabulary skills make a significant contribution to almost all aspects of second language proficiency.

There have been a great number of different approaches to language learning, each with a different outlook on vocabulary (Richards & Rodgers, 2001). Consequently, research on vocabulary acquisition is likely to yield insightful implications for effective second language learning and instruction.

A review of the related literature shows that vocabulary learning and teaching research has followed basically two approaches: vocabulary can be either learned implicitly and incidentally, or taught explicitly and intentionally. In effect, there has been a long-running debate about which of these two methods of learning vocabulary is more important. Conventionally, the related literature proposes either an explicit or an implicit approach to the teaching and learning of vocabulary. Explicit vocabulary learning engages learners in activities that focus attention primarily on vocabulary. Several key principles which can help guide teachers in deciding basic questions of what to teach and how to teach include integrating new vocabulary with old, facilitating imaging, using a variety of techniques, providing a number of encounters with a word, encouraging independent learning strategies, and promoting a deep level of processing (Sokmen, 1997). Of these, promoting a deep level of cognitive processing seems to be of paramount importance considering the aforementioned theories of forgetting. In other words, the importance of promoting a deep level of processing is to transfer information from short-term memory to long-term memory, which has almost unlimited storage capacity. Therefore, it is held that the more learners manipulate and think about a word, the more likely it is that the word will be transferred into long-term memory. Research suggests that efficient learning of vocabulary is an incremental process, one that requires meaningful recurring encounters with a word at successive levels of difficulty over time (Decarrico, 1999).

On the other hand, implicit vocabulary learning occurs when the mind is concentrated elsewhere, such as on comprehending a written text or understanding spoken material. One of the premises of implicit vocabulary learning is that new words should not be presented in isolation and should not be learnt by mere rote memorization. It follows that new vocabulary items should be presented in contexts rich enough to provide clues to meaning and that learners should be given multiple exposure to items they are supposed to learn (Nation, 2001).

2. Review of the related literature

2.1 Types of vocabulary learning

An overall review of literature leads us to the fact that generally four types of vocabulary learning can be distinguished: namely, incidental, intentional, implicit, and explicit. The incidental/intentional and implicit/explicit distinctions are straightforward. When it comes to the distinction of incidental vs. implicit distinction, however, things get more complex and misunderstandings begin to appear. Thus, certain in-depth definitions of the terms are provided here.

2.1.1 Implicit / explicit learning
A central concept in cognitive psychology as well as in second language acquisition research that has generated a host of fruitful work is the implicit / explicit distinction, which takes several different forms and has been applied to different referents. For instance, researchers are intrigued by the processes of implicit and explicit learning, by the nature of implicit and explicit knowledge, and by the effect of implicit and explicit teaching strategies on language acquisition (Berry, 1994).

In the realms of cognitive psychology and second language acquisition alike, the presence of awareness serves as a primary defining feature in terms of this implicit / explicit distinction. Schmidt (2001) elucidates in great length the role of awareness in implicit and explicit learning, the definition of the former being “learning without awareness” whereas the latter, “learning with awareness”. The sheer weight that Schmidt (2001) has allocated to awareness (or attention/ consciousness) is not incidental. Winter and Reber (1994) believe that the spirit of implicit learning is mirrored in the notion that people can under some circumstances absorb knowledge or information from the environment without awareness of the learning process. Similar viewpoints are presented with reference to attention by Schmidt (2000), who considers explicit learning the allocation of attention directly on the information to be learned.

Ellis (1994) also brings to the attention of the discussion on the implicit/explicit dimension the importance of conscious operations. He specifies implicit learning as the “acquisition of knowledge about the underlying structure of a complex stimulus environment by a process which takes place naturally, simply and without conscious operations” (p. 1). Explicit learning, on the contrary, refers to a more conscious operation where the individual makes and tests hypotheses in a search for structure. Put simply, knowledge attainment may be achieved either by abstraction of the structural nature of the stimulus via exposure to instances or by searching for information then forming and testing hypotheses or via assimilation of given rules.

This concept of hypothesis building and testing is taken up by Berry (1994) in her definition of implicit and explicit learning and yet is viewed in somewhat different light. She defines these two modes of learning not in terms of consciousness but of the recourse to deliberate strategies: Learning is implicit when people learn to employ the structure of an environment without using such analytic strategies as generating and testing hypotheses; learning may be explicit when such deliberate strategies are used. Given that, Berry (1994) provides little elaboration on the relationship between deliberate strategies and consciousness, it remains to be seen whether these two terms are co-referent from her standpoint, but it has almost become conventional wisdom that consciousness has some role to play in the discussion of the implicit – explicit dimension.

The current study formulates the definition of implicit learning and explicit learning as follow:

Implicit Learning

a) No attention on the part of learners is allocated directly on the information to be learned.
b) No conscious operations on the part of learners are involved in the learning process.
c) Learners are unaware of the process of learning.
d) Learners are unaware of the information to be learned.
e) Learners are unaware of the resultant knowledge from the learning process.
f) Learners do not exploit analytic strategies such as hypothesis formation to learn the knowledge.

Explicit Learning
g) Learners focus their attention directly on the information to be learned.

h) Conscious operations on the part of learners are involved in the learning process.

i) Learners are aware of the process of learning.

j) Learners are aware of the information to be learned.

k) Learners are aware of the resultant knowledge from the learning process.

l) Learners might exploit analytic strategies such as hypothesis formation to learn the knowledge.

Following a general definition of implicit and explicit learning comes the issue of the relative effectiveness of these two modes of learning, which sparks another debate in research on second language acquisition. In line with the consciousness issue advanced in cognitive psychology, explicit learning is generally viewed as facilitative, in that it promises the greatest chance for the acquisition of information by virtue of direct attention to it (Schmidt, 2001).

2.2 Previous studies

Shmidt (2001) points out that incidental learning is definitely passive in that it can happen when the focus of attention is on some relevant features of input. However, he believes that since incidental learning is useful in task-based language, pedagogy is still a fruitful area of investigation. He further notes that there is an argument that maintains what is learned, whether incidentally or intentionally is what is noticed.

So far, many studies have been carried out in the second language acquisition (SLA) concerning vocabulary learning/teaching approaches. For instance, Zimmerman (1997) investigated the role of incidental and intentional vocabulary acquisition. They conclude that incidental vocabulary learning is not entirely incidental in that learners pay at least some attention to individual words. Zimmerman (1997) mentions the following advantages of incidental vocabulary learning:

   a. It is contextualized, giving the learner a rich sense of word use and meaning.

   b. It is pedagogically efficient in that it yields two activities at the same time: vocabulary acquisition and reading.

   c. It is more learner-based, in that it is the learner who selects the reading materials.

Paribakht and Wesche (1999) also conducted research investigating the relationship between reading and incidental L2 vocabulary acquisition. Their study demonstrated that incidental acquisition of new lexical knowledge through reading of thematically related texts; hence, vocabulary knowledge may be acquired as a by-product of reading comprehension. In addition, their study showed that learners’ strategies, namely, inferencing, was the main vocabulary strategy employed.

Among the other factors, frequency of exposure to new vocabularies is another determining factor in learning vocabulary. Rott (1999) studied the effect of frequency with which words occur in a reading text and the role of reading as an input resource in vocabulary acquisition. Her study examined whether intermediate learners incidentally acquire and retain unknown vocabulary by reading a text. The result of the study indicated that, regarding retention measures on productive vocabulary knowledge, only half of the subjects displayed a significant rate of retention, and on receptive knowledge, all but one experimental group retained vocabularies over four weeks.
Hulstijn (2006) makes a distinction between intentional and incidental learning as “Intentional learning refers to the learning mode in which participants are informed, prior to their engagement in a learning task, that they will be tested afterward on their retention of a particular type of information. Incidental learning refers to the mode in which participants are not forewarned of an upcoming retention test for a particular type of information.” Incidental learning has been defined differently by scholars in the field. For instance, Schmidt (2000) presented three definitions for incidental learning: (1) learning without the intent to learn, (2) the learning of one stimulus aspect while paying attention to another stimulus aspect incidental learning is learning of one thing when the learner's primary objective is to do something else, and (3) the learning of formal features through a focus of attention on semantic features. Moreover, Hulstijn (1996; cited in Gass, 1999) asserts that the definition of incidental learning is: “learning in the absence of an intention to learn.”

In spite of the fact that incidental and intentional learning might seem similar to implicit and explicit learning, respectively, these two dichotomies are not identical. As Paradis (1994; cited in Hulstijn, 2003) points out, since implicit competence is incidentally acquired, it is stored implicitly and is used automatically, it means more than incidental learning. Therefore, while incidental vocabulary learning of vocabulary may be a useful way of acquiring vocabularies for most advanced learners, intentional/explicit instruction is essential for beginning learners whose reading ability is limited (Hunt & Beglar, 1998).

2.3. Statement of the problem

While vocabulary knowledge is central to language and of critical importance to the typical language learner (Zimmerman, 1997), in many EFL classes, teachers still tend to allocate more time to grammar or the structure of the language. Maybe, it is because many English language teachers prefer emphasizing grammar rather than vocabulary because grammar is a finite system, whereas vocabulary is not (Sheehan, 2004). And when the teaching of vocabulary items is taken into account, teachers take it for granted and have students develop their knowledge of vocabulary on their own without giving them enough explicit instruction. As a result, students do not make any effort to reach the meaning and it is inevitable that they probably will not remember the meaning of the new words, or even worse, they won’t be able to use the new words they have learned even if they remember the meaning because they don’t know the exact meaning and use of the words. Therefore, many of these students have problems reading texts in English, particularly at lower levels.

2.4. Research Questions

1. Which method of vocabulary instruction - implicit or explicit- has a better influence on students’ vocabulary learning?
2. Which method of explicit vocabulary instruction - giving marginal glossary or checking words in dictionary- leads to better learning of vocabulary?

2.5. Research Null Hypotheses

Based on the above research questions, the following hypotheses have been proposed to find answers to the questions:

1. Explicit vocabulary instruction does not have a better influence on students’ vocabulary learning than implicit instruction.
2. Between the two explicit methods of vocabulary instruction, checking words in dictionary does not lead to better learning of vocabulary as compared with giving marginal glossary.

3. Methodology

3.1. Participants

A total of 30 first-year students from an intact class majoring in English translation took part in this study. All of them have been studying English at Islamic Azad University for one year, and have taken the same number of courses. All the participants from the intact class took part in a 40-item proficiency test which was used to check the homogeneity of the group in terms of their proficiency level. Only those students who scored between 15 to 25 were included in the study.

3.2. Instrumentations

The materials used in this study included a 40-item proficiency test, three reading comprehension passages, and three 10-item vocabulary tests used as pre-test and post-test. The proficiency test (Fowler & Cor, 1998) consisted of 40-items vocabulary, structure, and reading comprehension questions. The reading passages were selected from Active Reading, Book Two (Anderson, 2007). Each passage included a one page text and 8 multiple-choice comprehension questions. Three 10-item multiple-choice vocabulary tests designed by the researcher were used as pre-tests to measure the participants’ knowledge of vocabulary prior to the treatments. The same tests were used as post-test to check their knowledge gain after the treatments.

3.3. Procedures

This study was conducted in five sessions. In the first session, all the students from an intact class took part in a 40-item proficiency test and only those who scored between 15 to 25 (21 participants) were included in the study. In the second session, the students’ knowledge of the 24 target words was checked through a 24-item pretest. All subjects participated in the three treatment sessions - implicit instruction, explicit instruction through giving marginal glossary, and explicit instruction by checking words in dictionary. After the pre-test, in the first session of the treatment, the subjects were given a reading passage with some multiple-choice reading comprehension questions. Then they were asked to read the passage and answer the comprehension questions. Following that the passages were collected and an eight-item vocabulary posttest was distributed among the students to check their knowledge gain of words. The purpose was to find out how much the students would learn through implicit exposure to words in a text. The same procedure was repeated in the second session of treatment, but the passage included some marginal glossary of 12 words in the text, eight of which were the target words. The purpose was to find out how much the students would learn through explicit exposure plus their definitions in a text. The same procedure was repeated in the third session. In this section, however, the passage didn’t include any glossary, but instead the students were asked to check the meanings of unknown words in the dictionary. The purpose was to find out how much the students would learn through explicit exposure which involved more cognitive load, in the sense used by Laufer (2001).
4. Results and Discussions

4.1 Descriptive statistics
Results of the pre-tests and post-test on vocabulary knowledge of the subjects (Table 4.1) show that the subjects had similar performances on the three vocabulary pre-tests. This also confirms that the subjects chosen based on their performance on the proficiency test were rather homogeneous.

Table 4.1. Mean and standard deviations for the pre-test and post-test for the three treatments

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Statistic</th>
<th>Statistic</th>
<th>Variance Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Variance</td>
</tr>
<tr>
<td>Explicit1 post</td>
<td>21</td>
<td>4.4285</td>
<td>1.36277</td>
</tr>
<tr>
<td>Explicit1 pre</td>
<td>21</td>
<td>2.0476</td>
<td>.88485</td>
</tr>
<tr>
<td>Explicit2 post</td>
<td>21</td>
<td>4.8095</td>
<td>1.07792</td>
</tr>
<tr>
<td>Explicit2 pre</td>
<td>21</td>
<td>2.1429</td>
<td>.85356</td>
</tr>
<tr>
<td>Implicit post</td>
<td>21</td>
<td>3.5714</td>
<td>1.28730</td>
</tr>
<tr>
<td>Implicit pre</td>
<td>21</td>
<td>1.8095</td>
<td>1.07792</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2 Inferential statistics
The following table shows the results of t-tests run to show the effectiveness of the treatments in each group. The paired-sample t-test is run between the pre- and post- test scores to determine the possible differences. The results in table 4.2 show that regarding the first treatment - implicit instruction - the difference between the pre-test and the post-test is statistically meaningful (P<.05), that is the treatment was effective.

Table 4.2. Paired Samples Test 1

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Mean</td>
</tr>
<tr>
<td>Implicit pre – Implicit post</td>
<td>-1.76190</td>
<td>.70034</td>
</tr>
</tbody>
</table>
The results in table 4.3 indicate that regarding the second treatment - explicit instruction with marginal glossary of the target words - the difference between the pre-test and the post-test is statistically meaningful (P<.05), that is the treatment was effective.

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>Sig (2-tailed)</th>
</tr>
</thead>
</table>

The results in table 4.4 show that regarding the third treatment - explicit instruction through having the subjects check the meanings of unknown words in dictionary - the difference between the pre-test and the post-test is statistically meaningful (P<.05), that is the treatment was effective.

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>Sig (2-tailed)</th>
</tr>
</thead>
</table>

Mean scores and standard deviations for the performances of the subjects on the three types of treatments are illustrated in table 4.5. As understood from the table, the subjects had the highest performance on the third treatment (explicit instruction through having the subjects check the meanings of unknown words in dictionary) with the mean score of 4.80, followed by their performance on the second treatment (explicit instruction with marginal glossary of the target words) with the mean score of 4.42. The subjects had the lowest score on the first treatment (implicit instruction), with the mean score of 3.57.
Results of one-way ANOVA are shown in Table 4.6. ANOVA was run to determine the possible differences for the three types of treatments. The results of F-value and Sig. showed that the difference among the mean scores of the three groups were statistically meaningful. Based on the means presented in earlier, the subjects with explicit instruction 1 and explicit instruction 2 performed better as compared with those who received implicit instruction. Thus, the first hypothesis (Explicit vocabulary instruction does not have a better influence on students’ vocabulary learning than implicit instruction) has been rejected.

Table 4.6. ANOVA of the three treatments

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>16.889</td>
<td>2</td>
<td>8.444</td>
<td>5.418</td>
</tr>
<tr>
<td>Within Groups</td>
<td>93.524</td>
<td>60</td>
<td>1.559</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>110.413</td>
<td>62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Between the two explicit methods of vocabulary instruction, checking words in the dictionary led to better learning of vocabulary as compared with giving marginal glossary. In order to compare two explicit groups, independent sample t-test was run (table 4.7). The results showed that though the subjects performed better with the third treatment, there was no statistically significant difference between the performances of two explicit
groups. Thus, the second hypothesis (Between the two explicit methods of vocabulary instruction, checking words in dictionary does not lead to better learning of vocabulary as compared with giving marginal glossary) has been rejected.

### Table 4.7. Independent Samples Test

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-Test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig</td>
</tr>
<tr>
<td>Scores</td>
<td>Equal variances assumed</td>
<td>1.261</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>-</td>
</tr>
</tbody>
</table>

5. Conclusions and Implications

Results of the present study have shown that explicit instruction of vocabulary better influenced vocabulary learning among Iranian pre-intermediate learners. Moreover, different levels of explicit learning/knowledge appear to exist which are not grasped by the implicit vs. explicit distinction. It is worthy of notice that as a result of this research, we can argue that incidental vocabulary acquisition occurs through operation of input hypothesis: that reading provides comprehensible and necessary input that eventually leads to acquisition. As Krashen (1989) points out, the acquisition of vocabulary and spelling is achieved through exposure to comprehensible input. Wode (1999) in a study of incidental vocabulary acquisition in a foreign language classroom, found that it is important to investigate in detail which properties of teaching are best suited to trigger the incidental learning with respect to vocabulary (and other linguistic elements). Ellis and He (1999) investigated the roles of modified input and output in the incidental acquisition of word meaning. Their study proved that interactional output which provides opportunities for learners to use new vocabularies contributes to better incidental vocabulary acquisition.

We may conclude that implicit learning is not entirely implicit, as learners must pay at least some attention to individual words. Students generally benefit from explicit vocabulary instruction in conjunction with extensive reading. To the extent that vocabulary learning is an implicit skill acquisition, it is also an explicit knowledge acquisition process (Ellis, 1994). The tunings of the implicit learning can be guided and governed by explicit learning and explicit learning can be consolidated and reinforced by implicit learning. Thus, implicit learning and explicit learning are, as it were, two sides of a coin in vocabulary acquisition.

Regarding the significance of vocabulary instruction, findings of the present research are useful for language teachers in planning a variety of contextualized vocabulary activities for EFL learners. The findings can also be of significance for material developers in preparing reading and vocabulary materials for language learners. Moreover, EFL learners may find the results useful in planning strategies to foster their vocabulary knowledge.
References


