# The Effect of Picture and Word List Presentation of Vocabulary on Iranian students' Vocabulary Learning

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abstract

Vocabulary may be considered the most essential part of any language. It has a central role in the process of second/foreign language learning because it can facilitate communication in general and comprehension in particular. Hence, research on vocabulary learning is significant for teachers and students. This study investigated the impact of two different techniques of vocabulary presentation i.e., picture vs. word list on improving Iranian students' vocabulary learning. There were twenty six preintermediate learners of English in this study. The treatment went for 10 weeks during which each group was instructed through one of the techniques mentioned above. The results, analyzed through Analysis of Covariance, revealed that there was a statistically significant difference between the two groups. The Picture group learners outperformed the Word list group learners. The results suggest that teaching vocabulary through picture technique is more conducive to vocabulary learning. The results will further be applied to curriculum design and materials development.

Key words: Vocabulary teaching, Picture, Word list, Curriculum design and Materials development

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**Introduction**

Learning new words is undeniably a necessary step in the process of learning a foreign language. Harmer (2001) states that ―If grammatical structures make up the skeleton of a language, it is vocabulary that provides the vital organs and the flesh of the language‖ (p. 153).

According to Carter and McCarthy (2014) the mastery of vocabulary has a central role in the process of second/foreign language learning because it facilitates communication in general and comprehension in particular. Richards and Rodgers (2014) emphasize the role of vocabulary in language teaching when they state that

―one of the first aspects of method designed to receive attention in second language teaching programs‖ (p.37). Thornbury (2002) holds that vocabulary plays a key role in learning a language because languages are based on words. Teaching

vocabulary was not the main goal of second language instruction. During the midtwentieth century the focus of language teaching techniques was on teaching grammatical structures and hence vocabulary teaching had a marginal role in classrooms.

According to Zimmerman (1997) although vocabulary is the most important component in speaking, listening, reading and writing, vocabulary learning has often been downgraded in comparison to grammatical structures. Since the late 1970s and early 1980s the idea that teaching grammatical components is more important than teaching vocabulary has been widely challenged and as a result vocabulary teaching has found its way back to the classrooms. In learning a foreign language, vocabulary plays an important role. Therefore, to communicate successfully in a foreign language, EFL learners need to acquire vocabulary and use it appropriately.

According to Gu (2003) most EFL learners fail to remember the words learnt through different techniques of vocabulary learning. They also do not know how to use L2 words in an appropriate context. This explains why L2 vocabulary needs to be accounted for in EFL classrooms and curricula.

Teaching vocabulary through different techniques of presentation has long been a matter of concern for researchers in the field of second language teaching/learning. Choosing the most appropriate vocabulary presentation is also one of the main struggles teachers encounter. Numerous studies have been conducted all over the world to investigate how L2 vocabulary can be learned more effectively and how teachers can help students in different EFL classrooms (e.g., Horst, 2005; Nassaji, 2003; Yoshii, 2006). However; according to De Groot (2006) it is still unclear which method of vocabulary presentation is the most effective one.  This study aims at investigating two different techniques of vocabulary presentation known as Picture and Word list to find out which one works better for vocabulary teaching.

This study aims to provide an answer for the following question:
Is there any significant difference between the effect of picture and word list techniques of vocabulary presentation on Iranian students' vocabulary learning?

**Literature review**
The ability to communicate in a foreign language includes learning of four skills of listening, speaking, reading, and writing. These four skills can be learnt better if one can increase their knowledge of the three main components of the language which are vocabulary, grammar, and pronunciation. So, learning vocabulary is a crucial issue in learning a foreign language (Nation, 2001).

According to Gu (2006) among these three, vocabulary or words are the most necessary one. Knowledge of vocabulary plays a significant role in almost all domains of language pedagogy. Neuman and Dwyer (2009, p. 385) defined vocabulary as " words we must know to communicate effectively; words in speaking and words in listening".

Many scholars have emphasized the importance of vocabulary acquisition in learning a foreign language (Maximo, 2000; Read, 2000; Gu, 2003; Tellier & Marion, 2008; Nation, 2013). Wilkins (1972, p. 111) states that ―without grammar a little communication is possible but without vocabulary it is impossible to communicate verbally‖. Carter and McCarthy (1988) define lexical competence as one of the most vital components of general language ability. Also, Schmitt (2000, p.55) emphasizes that ―lexical knowledge is central to communicative competence and to the acquisition of a second language‖. Moreover, Gass (1999, p. 325) claims that ―learning a second language means learning its vocabulary‖.

A number of researchers have recently examined the effectiveness of different techniques of vocabulary instruction including contextualized vocabulary presentation (File & Adams, 2010), extensive reading on vocabulary development (Min, 2008), enhancing self-efficacy in vocabulary learning (Mizumoto, 2013) vocabulary learning strategies (Singleton, 2008) the use of glosses and input-output cycles in lexical acquisition and retention (Rott, Williams & Cameron, 2002). However, according to Baleghizadeh and Ashoori (2011) few research studies have been conducted on the effectiveness of different methods of vocabulary presentation.

Oxford and Crookall (1990) classify different techniques of vocabulary presentation into four categories as (1) de-contextualized in which words are presented in isolation and includes word lists, flashcards, and dictionary use. Rote memorization is an important part of de-contextualized learning; (2) semicontextualized in which there is some degree of contextuality but not full contextualization and includes; pictures, word grouping, keywords, physical responses, associations, and semantic

mapping. In semi-contextualized learning new words are linked with something which is meaningful to the learner, but they are not used as naturalistic communication; (3) fully contextualized in which new words are taught through a more or less communicative context and through four language skills i.e., reading, listening, speaking, and writing. These four skills are emphasized because the basic assumption of this approach is that extensive amounts of reading would automatically increase the amount of learners' vocabulary learning (4) structured reviewing in which other techniques are embedded at any part of the contextuality continuum and requires going back over second language vocabulary at different intervals. According to Oxford and Crookall (1990) all of vocabulary presentation techniques can be classified into the first three categories i.e., decontextualizing, semi-contextualizing, and fully contextualizing because adaptable techniques reinforce those three categories of instruction.

Also Nation (2013) states that there are two different methods of vocabulary presentation as explicit methods which are direct and de-

contextualized in which students are given definitions or analysis of word roots or affixes of words to be learned, and implicit methods which are indirect and contextualized in which students are exposed to words or given opportunities to do a great deal of reading to increase their knowledge of vocabulary. Teaching through pictures is considered a semi-contextualized method and word list is considered a decontextualized method of vocabulary presentation. Oxford and Scarcella (1994) contend that while de-contextualized learning (word lists) may help students memorize vocabulary for tests, students are likely to rapidly forget words memorized from lists. Also McCarthy (1990) hold that a word which is learnt in a meaningful context is best assimilated and remembered. So contextualized learning is a better means for long term retention of materials.

The usefulness of different vocabulary learning and teaching techniques is known as a key factor in L1 and L2 learning. In what follows two different techniques of vocabulary presentation which are the main concern of the present study are discussed.

Picture

According to Hill (1990) ―the standard classroom‖ is not usually an ideal environment for learning a language and as a result teachers use different aids in order to make classrooms better places for learning. According to Hill one of the best aids to be used in classrooms are pictures because ―they bring images of reality into the unnatural world of the language classroom.‖ (Hill 1990, p.1).

Visual literacy has been defined as the use of visible or mental visuals for learning, communication, conveying meaning, and having aesthetic effect (Brill, Kim, & Branch, 2007). A picture is included within the scope of visible visuals. Johnson (2008) believes that the main part of research in visual literacy is concerned with its relation with education and pedagogy. The educational significance of

visual learning can be justified through the fact that the process of learning has a strong relationship with human senses. As said by Harmer (2001) pictures are very important tools in classrooms, because teachers can use them as ways for vocabulary presentation and meaning checking.

Hill (1990) enumerates a number of benefits of using pictures. They are usually available and they are often free and cheap. Teachers can get them from a variety of different sources such as books, magazines, and the internet. Harmer

(2001, p.134) holds that ―teachers have always used pictures or graphics -whether drawn, taken from books, newspapers and magazines, or photographs- to facilitate learning‖. They are usually flexible that is they can be used for different types of class activities. Finally they can be presented in a variety of different forms and shapes which can motivate learners.

According to Richards and Rodgers (2014) using pictures for presenting new vocabulary has been a fundamental principle in many language classes. They further hold that ―the demonstration and using of visual aids to show the meaning of a new vocabulary provide physical foci for student learning and also create memorable images to facilitate student recall‖ (p. 86). They believe that the visual aids are associative mediators which show the relationship between form and meaning, and contribute to learning and recall of new words.

Word-picture activity as a technique of second language vocabulary acquisition can form a mental link at the early stages of second language learning, especially if it is created by learners themselves (Sokeman, 1997). Bush (2007) refers to the advantages of using pictures in the vocabulary classroom as a means for learning new vocabulary (linguistic aspect), a means for introducing culture (cultural aspect) and as an advance organizer providing learners with a context for language learning.

In a study conducted by Tonzar, Lotto, and Job (2009), the effect of picture-learning and word-mediated learning techniques on the students' vocabulary development in English and German was examined. The results indicated that there was a significant difference between these two techniques. They concluded that picture-learning technique was more effective than wordmediated technique in vocabulary learning.

Besides their benefits pictures have their limitations too. According to McCarthy (1992) and Thornbury (2004) pictures are not suitable and cannot be used for demonstrating the meaning of all words especially abstract ones. Moreover finding appropriate pictures can be very time-consuming for a specific type of activity especially for those beginner teachers who lack their own collections. Finally unclear pictures may arouse problems in the teaching and learning process since the students may misunderstand them.

**Word list**

A word list is a piece of paper in which students have a list of L2 words along with their L1 translations in front of each word. The list can be generated either by teachers or students themselves. According to Oxford and Crookal (1990) the assumptions behind using this technique is that ―learners do not need much, if any, context to learn vocabulary, and that rote memorization is perfectly adequate‖ (p.10). In this technique the main emphasis is on repetition and memorization, and it is not based on meaningful learning. According to Nation (1982, 2013) learners make meaningful associations when they are presented with the L1 equivalence of foreign words because they relate the new words to their background knowledge of that word in their mother tongue. These associations help to reinforce vocabulary learning and retention.

The issue of using word lists in order to teach vocabulary has been controversial. On the one hand some scholars in the field of teaching English as a foreign language believe that word lists can help learners acquire vocabulary items in isolation (Hulstijn, 2001; Nation, 2013; Thornbury, 2002). Harley (1995, P.11) stated that "reference to the L1 provides useful support for L2 vocabulary learning". Takahashi (2012) enumerates a number of benefits for using original word lists as 1) they are written in a very simple form with the single, most frequent meaning; (2) they are divided into very small boxes in alphabetical order which helps learners to easily find the words on the list; (3) word lists are portable so students can look at them anytime and anywhere they want. Also, according to Thornbury (2002) it is very economical for students to learn vocabulary in a short time. On the other hand, other scholars believe that learners need to acquire new vocabulary items in meaningful contexts (Baumann & Kumeeuni, 1991; Blachowicz & Fisher, 2000; Ianacone, 1993; Nation, 2013). Ianacone (1993) argued that vocabulary lists are artificial because they lack context and cannot motivate students to learn. Khodareza & Komachali (2012) argued that as a word list is monotonous, learners pay less attention in learning words through word lists. Moreover, Baleghizadeh and Ashoori (2011) stated that using the word list method can be problematic because ―some words may receive more attention compared to other words in the list due to their particular positions‖ (p.7). There are some studies which recommend that teaching words in isolation is better than presenting them in context (Laufer & Shmueli, 1997; Nation, 2013; Qian, 1996). Nation (2013) in a study compared the effectiveness of vocabulary learning through context and word list and concluded that learning vocabulary through word lists is more effective than other contextualized techniques. Moreover, Hulstijn( 2001) concludes that words which are learnt through word lists can better remain in the long term memory of the learners and can be retrieved easily.

As it can be seen the debate concerning learning words in context vs. learning words out of context has not been resolved yet and there are still some conflicts over teaching words in isolation or

teaching them in context. So the purpose of this study is to compare the effect of the two different techniques of vocabulary presentation i.e., pictures and word lists on improving Iranian high school students' vocabulary learning to see which one is more conducive to students' vocabulary learning.

**Method Participants**

The participants of this study were twenty six pre-intermediate learners of English attending Marefat language institute of Tehran. They were both male and female. Their age range was approximately between 11 to15. The sampling method was a convenient one and the participants were assigned to two groups and received different treatments including: teaching vocabulary through pictures (N=14) and teaching vocabulary through a word list (N=12).The treatment was given in students' classroom during the regular 90 minutes English language teaching period for 10 sessions.

**Instrumentation**

An achievement vocabulary test was prepared by the researcher to measure students' vocabulary ability at the outset of the study. This test was administered on the first session as a pre-test and at the end of the course as the post-test. The test consisted of 20 vocabulary items which measured the knowledge of the words taught in the study. In order to validate the test, its face validity and content validity were confirmed by three experts in the field. The reliability of the test was estimated through KR-21 formula and reliability index turned out to be .73. Moreover 100 words were chosen to be taught during the treatment. These words were prepared in both word lists and pictures.

**Procedure**

Before the start of the treatment, the participants sat for the pre-test. Each correct answer received one point and there were no penalties for incorrect responses. Then the two groups received the treatment for 10 sessions. These words were presented differently for each group and each group received 10 new words each session.

In group 1, the instruction of new words was through pictures: in 10 sessions, 100 pictures were presented. Attempt was made to choose the best and the clearest pictures in which the focus was on the new words only. In order for the participants to be familiar with the spelling of the words, it was considered appropriate to write the words on each picture. In group 2, the teacher provided students with the list of words along with the Persian equivalent of each word. At the end of the experimental period (10 sessions), in order to assess the participants' vocabulary learning, a 20-item multiple-choice test was given to the two groups as a post-test. The administration and grading were the same as that of the pre-test.

## Results

The present study intended to answer the following research question:

Is there any significant difference between Picture and Word list techniques of vocabulary presentation on Iranian students' vocabulary learning?

To answer the research question, data were collected through the pre-test and post-test of the two groups to compare their vocabulary gains. The scores of the pre-test and post-test were analyzed through analysis of covariance (ANACOVA). To control for their initial differences on vocabulary performance the pre-test was considered as the covariate. Levene's test was used before a comparison of means between the two groups. Levene's test of equality of error variances as shown in Table 1 tests the null hypothesis that error variance of the dependent variable is equal across groups, $F (1,24) = 2.81$ $P >.1$. Therefore, a parametric test such as A NCOVA can be used for data analysis.

*Table 1*

*Levene's Test of Equality of Error Variances on posttest scores*

| F | df1 | df2 | Sig. |
|---|---|---|---|
| 2.815 | 1 | 24 | .106 |

To ensure that pre-existing differences among the participants do not conflate the results, a univariate analysis of covariance was run on the data. The results presented in Table 2 show that there is no significant difference between groups at the outset of the study, $F (1,24) = .3.82$, $P >.06$. Furthermore, the interaction between the treatment and the pretest is not significant, $F (1,24) = .05$, $P >.82$. Therefore, any differences detected in the posttest can be readily attributed to the effect of the treatment.

*Table 2*

*Tests of Between-Subjects Effects of the posttest*

| Source | Type III Sum of Squares | Df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Corrected Model | 429.430ª | 3 | 143.143 | 41.864 | .000 | .851 |
| | 74.042 | 1 | 74.042 | 21.654 | .000 | .496 |
| **Treatment** | **18.442** | **1** | **18.442** | **5.394** | **.030** | **.197** |
| Pretest | 13.084 | 1 | 13.084 | 3.827 | .063 | .148 |
| Treatment * pretest | .178 | 1 | .178 | .052 | .822 | .002 |
| Error | 75.224 | 22 | 3.419 | | | |
| Total | 4177.000 | 26 | | | | |
| Corrected Total | 504.654 | 25 | | | | |

a. R Squared = .851 (Adjusted R Squared = .831)

As it can be seen in the table above, the treatment has been effective, F (1,24)= 5.39 , P = .03, η= .19, with a moderate effect size. To find out which group has performed better, pairwise comparison of the results should be examined.

*Table 3*
*Pairwise Comparisons of the groups on the posttest*

| (I) vocab teaching methods | (J) vocab teaching methods | Mean Difference (I-J) | Std. Error | Sig | 95% Confidence Interval for Difference | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| Picture | Word list | 7.309 | .772 | .000 | 5.711 | 8.907 |

Pairwise comparison, Table 3, helps readers to see that the group taught through pictures outperformed the word list group. The mean difference is 7.3 at (P = .00).

Discussion

The results of the present study revealed that the performance of the students who were taught through pictures was significantly better than that of the students who were taught through word lists. The results of the present study provide more support for Paivio's (1971, 1976) dual-coding theory according to which pictures are remembered better than words because they are more likely to be represented by both verbal and image codes i.e., information is provided through both visual and verbal channels while words are arbitrary and they are presented only in verbal code. The results are also in line with previous researches (e.g., Bush, 2007; Harmer, 2001; Sokeman, 1997; Tonzar, Lotto, & Job, 2009).

There are a number of reasons for justifying these findings. The first explanation is that pictures provides a direct association between form and meaning (Richards & Rodgers, 2001) thereby making this relationship meaningful so whenever they see the word they have a vivid picture of that word which can represent it in their mind. As it was mentioned, pictures give life to words which can promote input processing and as a result leads to better learning. The second explanation would be the attractiveness of pictures for learners. The use of pictures makes the process of vocabulary learning more enjoyable and interesting; as Wright (1990) pointed out, pictures are motivating and draw students' attention and they make visual images of the words presented to them. Another reason is that pictures have a more stable effect on learners and they concentrate on a single word and are not distracted by other elements in the sentence e.g., syntactic factors and functions, and as Hill (1990) stated ―pictures bring images of reality into the unnatural world of the language classroom‖ (p. 1). Moreover, pictures attract students' attention and make teaching and learning activities more interesting which can help teachers better involve learners in the classroom and thereby promote learning. They can also better handle their classes in terms of discipline and management. The results of the present study strongly corresponds to Harmer (2001), Shapiro and Waters (2005), and Wei's (2007) findings which shows that pictures are valuable tools for teaching vocabulary.

**Conclusions**

The current study investigated the effect of two different methods of vocabulary presentation on the vocabulary development of Iranian students. Based on the findings of the present study, it could be concluded that teaching words through the picture method is more effective than using word lists. This finding can have both theoretical and practical implications for teachers and syllabus designers. English teachers could use the findings of this study and organize their vocabulary instruction using picture method. The findings may inspire teachers who still rely on traditional verbal method of translation in their teaching to change their viewpoint in favor of other methods of vocabulary presentation and try to use visuals in classrooms. Also those who are in charge of syllabus designing and text-book writing could infuse the findings into text-books and organize the vocabulary section of the books by using different pictures in accordance to the level of those students for whom the material is being designed.

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