RESEARCH ARTICLE

A COMPARATIVE STUDY OF THE EFFECTS OF PICTORIAL METHOD AND TRANSLATION METHOD ON EFL LEARNERS' VOCABULARY KNOWLEDGE

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ABSTRACT

Vocabulary is one of the language elements that should be learned and taught. It cannot be denied that it will be difficult to master language without mastering an understanding of a certain number of words. The primary objective of the study was to see whether there would be any significant difference between using picture and translation in teaching vocabulary. Sixty five students were randomly selected from two intact classes studying English at Novin Institute in Gorgan, Iran. Their level of English proficiency was determined on the basis of their scores on the Nelson proficiency test. The two classes were randomly assigned to an experimental group and a control group. Next, the two groups were given a vocabulary test as pretest. Afterward, the experimental group was taught some new words by pictorial method, while the control group was taught by translation method. Finally, the participants in both groups were administered the vocabulary posttest after the treatment. The findings indicated that teaching new words by pictorial method can be more effective than the method in which the teacher tried to translate the new words into Persian as L1.

Key words: Vocabulary instruction; Pictorial method; Translation method; EFL learners

INTRODUCTION

Learning a second language (L2) is not an easy task. To begin to accomplish this feat, learners must acquire a new system of syntax (i.e., grammar, or how words are strung together), morphology (i.e., word prefixes and suffixes), semantics (i.e., word meanings),phonology (i.e., word sounds), spelling, and usage (i.e., how words are used in context).

What is common to all these aspects of language, however, is knowledge of the individual words of the L2. Arguably, one of the first things learners must acquire specially in the case of beginners is a basic list of words. Thus, before beginners can create a grammatical sentence, they must have a minimum knowledge ofL2 vocabulary. For this reason, the study of L2 vocabulary acquisition is extremely important,

especially with regard to early stages of L2 development.

On the other hand, the main objective of learning English at elementary school or beginner level is to develop limited communicative competence orally at school context and having awareness of the importance of language to improve national competitiveness in a global society. To achieve this objective, the teaching of English is directed to develop the students' competence in listening, speaking, reading, and writing skills with thematic vocabulary and relevant grammatical concept as well as pronunciation and spelling. Among the four language skills and four language components mentioned above, vocabulary is one of the most essential parts which enables learners to

communicate in target language. Then a learner has to make use of words.

Statement of the Problem

According to Allen (1983), although there is an essential need to acquire L2 words, it is surprising that L2 vocabulary acquisition was largely neglected until the 1980s. Allen gave three possible reasons for this neglect. Firstly, researchers were more interested in how words we restrung together in grammatical sentences and not necessarily in how individual words are learned or used. Secondly, some researchers believed that learning too many words would interfere with sentence production (or correct grammar). And thirdly, some methodologists thought that the meanings of words could not be adequately taught explicitly. Consequently, this new research has significantly increased our understanding of how individual words are learned. But despite this surge in research, much has yet to be discovered. Therefore, the current study will attempt to add to the existing body of knowledge on L2 vocabulary acquisition by addressing the two following specific shortcomings in the literature.

Two shortcomings in the current research literature on L2 vocabulary acquisition motivate the present study. Firstly, classrooms and textbooks make common use of pictures when teaching L2 vocabulary, but little research has been done on the effectiveness of decontextualized pictures in learning L2 vocabulary (Kopstein&Roshal, 1954; Wimer&Lambert, 1959). Secondly, L2 vocabulary research commonly employs measures that assess the recall of word meaning (e.g., Paribakht&Wesche 1997), or the depth of vocabulary acquisition (e.g., Laufer, Elder, Hill, &Congdon, 2004), but few studies have used separate measures to assess the learning of two important aspects of word knowledge: word form and word meaning (e.g., Webb, 2005).

Significance of the Study

The study of L2 vocabulary learning from pictures is important for three reasons. First, as Coady (1997) argued, a "beginner's paradox" exists in L2 learning. To Coady the question is how it is possible for beginners to acquire vocabulary through reading if they do not have enough words to do extensive reading. Surely beginners must obtain aminimum vocabulary before they can begin to understand texts to such a degree that they can acquire some

vocabulary items. He argued for explicit instruction of 3000 word families (i.e. words with the same root meaning but different morphologies) following Laufer(1997) before learners can adequately begin to acquire vocabulary through reading.

The second reason for doing some research on the effectiveness of pictorial method in L2 vocabulary acquisition is related to its benefits to language classrooms. Pictures are practical and effective, especially in the case of concrete nouns. In terms of the different manners of teaching decontextualized L2 concrete nouns in the classroom, teachers have a few common options. For instance, language teachers may point to physical objects in the classroom. However, classroom objects are limited, and field trips can often be impractical (i.e., too costly for language schools).Therefore, although physical objects, or scenes maybe effective, the study of words from physical objects may not reap practical benefits. Consequently, teachers are often relegated to techniques that are more accessible in the classroom.

One of the most common techniques is for students to seek Ll translations of new L2 words. But although practical, translations can be problematic in that words have different usages in different languages, and the teacher cannot control for problematic translations (Swan, 1997). Therefore, because of the problematic nature of translations, pictures may be the most appropriate technique for teaching L2 vocabulary. It is so because they are both effective, in the sense of their universal understanding, and practical, in terms of their availability in such media as picture dictionaries, exercise books, and the Internet although it may not be supported by doing research. Consequently, lack of research into the effectiveness of pictures in L2 word learning at elementary level and its comparison with translation technique needs to be addressed.

To solve the above-mentioned problem, the researcher used pictures in teaching vocabulary in order to arouse the attention and improve the motivation of the students to learn vocabulary. Elementary students are more interested in drawing and coloring some pictures. So, using pictures can be regarded as method used to stimulate their interest and motivation in learning English. As it is supported by Allen(1983), young learners are more interested in

drawing especially when the teacher allows them to draw on the board.

Importance of Vocabulary Learning

Vocabulary is one of the language elements that should be learned and taught. It cannot be denied that it will be difficult to master language without mastering an understanding of a certain number of vocabularies.

In learning English, vocabulary plays a very significant role in the four English language skills. As Schmit and McCarthy (1997) believed, vocabulary has an important role in learning language skills. In listening ability, vocabulary gives easiness for the learners to comprehend what the other person says. In speaking and writing, vocabulary gives easiness for the learners to expand their ideas. In reading, vocabulary gives easiness for the learners to comprehend the text. In conclusion, vocabulary should not be neglected by anyone who is learning a language.

Use of Translation

As Nation (2005) maintains, translation is a technique for teaching vocabulary. He showed two examples of activities. First, the teacher can use a card in introducing a new word. He can show the card to the students and the students will say it in English if they can, but if they cannot, the teacher immediately help them by giving the translation of it. Another one is activating the students in using the dictionaries. In reading activity, when a useful word occurs in a reading text, the teacher can teach the strategy of using a dictionary to the students.

According to Duff (1989), translation has been generally out of favor for language teaching and learning. He believed that translation is largely ignored as a valid activity for language practice and improvement. The students cannot develop their language practically by using translation. According to him, there are some reasons why teachers do not like to apply translation for teaching and learning activity including the following: (1) translation is text-bound and only confined to two language skills including reading and writing. In addition, it is not a communicative activity because it involves no oral interaction; (2) translation is not suitable for classroom work because the students only do some writing activities which are more time-consuming; (3) translation is not matched to the general need of a language learner, that is, the elementary students need to be able to speak as soon as possible; (4) translation is not an attractive way to present for beginners because it requires the use of mother tongue; and finally, translation is boring to do.

Use of Pictures

Sudjana and Rivai (1997) stated that pictures are graphic media used for teaching process. According to them, there are some reasons behind using realia in teaching English including the followings:

1. The teaching will attract students' attention.
2. The teaching material will be more meaningful and it can be understood easily by the students.
3. The teaching method will be varied so the verbal communication comes from not only the teacher as the center of communication but also the students.
4. Students will have many activities like observation or demonstration.

It is a reality that teaching English is not easy especially for the elementary school students. The teacher should be more patient in doing the activity with the children in or out of the classroom (p. 3).

Previous Studies

Recently, researchers pay more attention to a number of strategies and techniques for teaching vocabulary (Boers, PiquerPiriz, Free, &Eyckmans, 2009; Mizumoto, & Kansai, 2009; Shen, 2010). Lexical problems can be assumed as one of the reasons for these researchers to study. Many researches showed that lexical problems frequently interfere with communication. According to Allen (1983),communication breaks down when people do not use the right words. Ellis (1990) proposed that studies in vocabulary learning are considered as a "promising area of inquiry" (p.214).

There are some research studies in L2 vocabulary acquisition which involve pictures. For example, Chun and Plass (1996) decided to compare different types of extra vocabulary focus in a reading task. Participants performed a computer reading in which they could freely look up any L2 word in a gloss and be presented with an Ll definition. For the target words, the glosses were of three types: Ll definition, Ll definition plus picture, or Ll definition plus video. Although the frequency or length of gloss searches was not controlled for, the post-test revealed the largest vocabulary gains in the Ll definition plus picture condition.

In addition, Kost, Foss and Lenzini (1999), found that not only did a picture plus Ll definition condition produce the greatest vocabulary gains on an immediate post-test, but also on a delayed post-test. These results provided some evidence for the usefulness of pictures in L2 vocabulary acquisition when used in addition to words in context.

Empirical evidence has so far demonstrated that pictorial clarification assists learners to comprehend and maintain L2 vocabularies. However, in their study, Boers, et al. (2009) claimed that pictorial elucidation is helpful. Their findings can be generalized to vocabulary learning, they may cast doubts on "the rather indiscriminate and abundant use of picuters in modern textbooks and CALL packages" (p. 367).

Within the framework of dual coding theory, Shen (2010) compared two methods: verbal encoding and verbal encoding plus imagery encoding. Analysis of the results revealed that, compared with the verbal encoding method, the verbal plus imagery encoding method does not demonstrate a greater effect in retention of the sound, shape, and meaning of concrete words, but statistically significant differences are present in retention of the shape and meaning of abstract words. Her findings hence support dual coding theory and confirm the importance of visual learning in Chinese vocabulary acquisition.

All the above-mentioned studies are related to learning vocabulary for adults but beginners do not have large enough vocabulary to reach the required 95-98% word understanding which is necessary for textual comprehension, let alone learn novel words from the context of texts. Therefore, in the case of beginners, pictures must be used to teach novel vocabulary in a decontextualized setting.

In terms of decontextualized learning with pictures, two studies are relevant. First, Kop stein and Rosh all (1954) compared L2 vocabulary learning with pictures to translations. They performed two experiments with 428 and 360 English participants respectively. Results revealed that participants in the study phase involving pictures significantly outperformed those in the translation condition. In another study, the study task involved the same two conditions (picture target word, and translation-target word), but the test task involved seeing an English translation and writing the correct Russian word. Once again, results revealed that participants in the study phase involving pictures significantly outperformed those in the translation condition (although the difference was less than in the first experiment).Kop stein and Roshallconcluded that pictures were superior to translations when learning novel L2 vocabulary in a paired-associate learning task. Although the effectiveness of mnemonics in vocabulary instruction has been investigated in manystudies,researchers suggested that they should not serve as a substitute for the principles of contextual learning, but must be added to the contextual method when this is necessary (Hall, Wilson, & Patterson, 1981).

Research Questions

Referring to the primary objective of the study, the main research questions raised here are as follows:

1. Does translation method have any effect on learning vocabulary?

2. Does pictorial method have any effect on learning vocabulary?

3. Is there any significant difference between pictorial method and translation method in teaching vocabulary?

METHODOLOGY

Participants

The participants in the study were selected from two intact classes consisting of 65 students studying English at Novin Institute in Gorgan, Iran. They had a mean age of 14 and had been studying English at elementary level. Their level of English proficiency was determined on the basis of their scores on the Nelson proficiency test. Each intact class was randomly selected to an experimental group and a control group. Because some of the students were absent during the implementation of one of the tests, they were excluded from the rest of the study resulting in 30 participants in the experimental group and 27 in the control group.

Instruments

Proficiency Test

In order to be assured of the homogeneity of the control and experimental groups in terms of English language proficiency, a test of NELSON, series 300B, was administered before the pretest. It proved to have a reliability of 0.74. It consisted of 40 multiple-

choice items consisting of grammar, vocabulary, pronunciation and reading. The time allotted was 40 minutes.

Vocabulary Pretest/Posttest

A test of vocabulary consisting of 30 multiple-choice items was prepared by the researchers and was used both as pretest and posttest. After revision by the researchers and two qualified English teachers, the test was administered to participants as pre and posttest. The test was used to ensure that the participants were not familiar with the new vocabulary items prior to the study and after the treatment, and to measure the effect of the treatment. It was piloted on 20 students of the same level, in order to (a) improve the questions, and (b) determine the time that was needed for participants to finish each test and it was found to be highly reliable. Their reliabilities were 0.82 and 0.79, respectively.

Research Design

A pretest-posttest control-group design was used for this study. The pretest-posttest control-group design is one way to assess the effects of an instruction intervention in a natural educational setting. This design consisted of administering a pretest on a dependent variable to both groups of participants. The independent variable was then administered to the treatment group. Following the treatment condition, the experimental and control groups took a post-test. The scores from the pre- and post-test were then compared to determine students' responses to the treatment.

Treatment

After administrating the test of Nelson test, 57 participants were left. The words which were selected to teach were divided into groups of seven words to be taught during each session. The reason for exposing the participants to seven words each session lies in Finocchiaro andBonomo's (1973) assertion that in general, no more than about eight new words should be presented at one time; otherwise, it is not manageable by the students. The treatment lasted for eight sessions, and each session was about 45 minutes.

In the experimental group which consisted of 30,the pictorial method was introduced. The new words were instructed by showing the pictures through the computer, some flash cards, real objects, and different steps such as, introducing the new words, pointing and the group repetition, individual repetition, and asking students.

On the other hand, the control group consisted of 27 students, and the translation method was used for the purpose of learning the new words. They were justified to learn and memorize the words just by the Persian translation and some of the explanations such as synonyms, antonyms, and definition explanation. Both groups received an equal amount of instructional treatments.

Procedure

In order to collect the data required for the fulfillment of the objectives, a lengthy procedure was taken. The first job was to determine the vocabulary knowledge of the participants by a vocabulary test in order to know whether they are familiar with these words or not. Then, a list of the unfamiliar words for the participants was selected for the main study. The treatment sessions were held in the next procedure within a few days or even a week interval. The experimental group was taught by pictorial method in order to learn the new words and the control group was taught by translation method for the purpose of learning the new words. Finally, the participants in both groups answered the vocabulary posttest after the treatment. After all participants answered all the tests, their performances were compared to see whether there was any significant difference between pictorial method and translation method.

RESULTS

For all statistical analyses in this study, .05 was used as the alpha level at which findings were considered to be significant. After the data were collected, they were analyzed using the Statistical Package for the Social Sciences (SPSS 16) software package to identify statistically significant difference between vocabulary pretest and posttest within the groups who received two different types of vocabulary instruction including pictorial and translation method.

To address the first research question, "Does translation method have any effect on learning vocabulary?", a paired-sample t-test was conducted on the vocabulary test before and after the treatment

to identify if statistically significant differences existed in the group instructed by pictorial method.

Table 1: Paired Sample T-Test of Vocabulary Knowledge for Translation Group

Paired Samples Statistics

		Mean	N	Std. Deviation	Mean difference	t	p
Pair 1	Pretest	5.6429	28	3.81240	7.57143	11.808	0.000
	Posttest	13.2143	28	5.51333			

As it is evident from Table 1, there is a significant difference between pre- and posttest in translation group in the Iranian context (t=11.439; *p*= .000).

To address the second research question, "Does pictorial method have any effect on learning vocabulary?", a paired-sample t-test was conducted on the vocabulary test before and after the treatment to identify if statistically significant differences existed in the group taught by pictorial method.

Table 2: Paired Sample T-Test of Vocabulary Knowledge for Pictorial Group

Paired Samples Statistics

		Mean	N	Std. Deviation	Mean differenceT		p
Pair 1	Pretest	5.9643	28	2.89932	15.3928	14.810	0.000
	Posttest	21.3571	28	5.36942			

As it is evident from Table 2, there is a significant difference between pre- and posttest in pictorial group in the Iranian context (t=14.810; *p*= .000).

To address the third research question, "Is there any significant difference between pictorial method and translation method in teaching vocabulary?", an independent samples t-test was carried out on the vocabulary test after the treatment to see whether statistically significant differences existed between the two groups taught by different methods.

Table 3: Comparison of both Groups' Performances on Pretest and Posttest

Group Statistics

	Group	N	Mean	Std. Deviation	t	p
Pretest	Translation	28	5.6429	3.81240	0.355	.724
	Pictorial	28	5.9643	2.89932		
Posttest	Translation	28	13.2143	5.51333	5.559	0.000
	Pictorial	28	21.3571	5.36942		

As the results of data analyses (t-test) in Table 3 above indicate that there was no significant difference between the two groups in the pretest, while there was a statistically significant difference between students' performance in vocabulary knowledge in the posttest (t= -5.559; *p*= .000). In other words, participants in the pictorial group scored higher in the posttest (M=21.357, SD= 5.369) after the selected vocabularies were taught by using pictures. Therefore, we can conclude that the teaching new words by using pictorial method can be more effective than the method in which the teacher tries to translate the new words into Persian. With respect to this point, it can be concluded that the method of teaching vocabulary through pictures plays a significant role in developing the level of the learners' vocabulary knowledge.

DISCUSSION AND CONCLUSION

Results of the t-test indicated that there are significant differences in the two groups' performance in vocabulary learning due to methods of teaching. These results are congruent with several studies on pictures and other multimedia such as Seigneuric and Ehrlich (2005), Brett (1997), Liang (2008). The mentioned studies tackled the use of multimedia in

teaching one or two skills, however, the current study investigated the effects of using picture on learning vocabulary.

The students' performance could be attributed to several reasons. One of these reasons is that learners created deep understanding as a result of motional text and picture. The learners engaged in substantial cognitive processing during learning which took place in both verbal and visual presentation as Mayer & Moreno (2003) stated. For example, learners could recall vocabulary and match pictures with words easily. Moreover, they could organize words and sentences in a mental way. In agreement with Herrington and Ervin (2007), the use of picture in this study might provide learners with authentic context that reflects the way the knowledge used in real life. Moreover, Clark and Paivio's (2005)Dual Coding Theory argued that concrete words gained advantages over abstract words. The use of Multimedia such as picture or PowerPoint can optimize learning in terms of retention and transfer. Paivio (1971) argued that imagery and verbal associative process play major roles in various educational domains. Finally, Multimedia has a great effect on motivation and keeps students interested in learning. Interesting lessons would keep the students interested and enable them to do their own self-directed learning.

Picture can also provide the language in actual use. It provides authentic context, relevant topic and actual materials which reflect students' real life. The multimedia program such as using pictures can help learners construct referential connections between two forms of mental representation systems: the verbal (text and words) and the visual one (animated pictures and text). These codes (verbal and visual) are interrelated with each other for processing information even when activated separately. This is consistent with what Paivio (1971) says about Dual-coding theory which is based on the assumption that memory and cognition are served by two separate systems, one specialized for dealing with verbal information, such as printed words, and the other for non-verbal information, such as pictures or real objects.

This study showed that picture can play an important role in facilitating vocabulary learning. One can say that the use of picture inside the classroom helps students to be more interested and more motivated to spend more time on tasks used for learning new words. In addition, picture can enhance enthusiasm in learning English. For example, shyness among students decreases as they feel less stressed and more confident in a language learning situation.

PEDAGOGICAL IMPLICATIONS

As the results display, using pictures is an instructional aid which could be more preferable than the traditional instructions. As a result, teachers should understand students' different learning styles and provide appropriate techniques to enhance effective teaching for EFL. Therefore, variation in techniques of teaching English as a foreign language is needed. English teachers should satisfy that employing technology in teaching is also one of the teachers' responsibilities in today's technological age to bring about effective learning.

In addition, multimedia should be used as a support material rather than the main tool; to achieve this, teachers should be trained to promote their skills in creating, selecting, and implementing multimedia. They should seek training opportunities to learn how to use technology, especially internet since we have different websites that can be helpful in teaching English.

Moreover, the adaptation of picture into the syllabus and lesson content should be used by teachers inside the classroom. Teachers could be self-makers of multimedia material. They can design simple activities using for example, "Power Point program activities", or they can use ready material on multimedia taken from different websites.

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