

Involvement Load Hypothesis: The Effect of Drawing Relevant Pictures on Iranian Young EFL Learners' L2 Vocabulary Performance

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Abstract

In the last decade, the field of word acquisition has received great interest. This current interest leads to research with realistic attempts for effective L2 vocabulary learning. In order to develop a foreign language, learners have to be able to comprehend what they are hearing and reading. That is, the input is required to be understandable in order for it to be practical and meaningful to the learner and help with acquisition (Krashen, 1982). Thus, the current study tried to investigate the effect of drawing relevant pictures on improving vocabulary recall of language learners. Sixty students participated in this study which lasted for one academic semester. The students were divided into two groups: one experimental group in which learners were taught new vocabulary items through drawing relevant pictures, and one control group whose students were taught the identical items through traditional instruction. At the beginning of the program, the researcher accomplished *Cambridge Mover Tests* in order to reassure the homogeneity of the students' proficiency level. A pretest subsequently was run on learners' L2 vocabulary knowledge. Then the intervention started. At the end of the sessions, one posttest was performed in order to measure effectiveness of the treatment. Afterwards, the researcher analyzed the gathered data. Because there were two groups in this study, the researcher utilized t-test for analysis, paired t-test for comparing the results within groups, and independent t-test for comparing the results between groups. The results proved that drawing pictures were indeed contributing to L2 vocabulary learning by the learners.

Keywords: drawing relevant pictures, vocabulary learning

INTRODUCTION

Vocabulary is an indispensable component for successful communication in the second language classroom. Though grammar is central, a lack of vocabulary might result in

complete breakdown in conveying a message. Words are the crucial elements of language use. Plenty of evidence suggests that the vocabulary size of a learner is highly predictive of his entire language ability (Gu 1994). One cannot communicate productively without a sufficient vocabulary. Limited vocabulary is a great obstacle that stops students from learning a foreign language (Zhihong, 2000, cited in Subekti & Lawson, 2007). According to Zimmerman (cited in Subekti & Lawson, 2007), vocabulary is crucial to language and of great importance to language learners. Gupta and MacWhinney (1997, cited in Subekti & Lawson, 2007:485) also dispute that learning unidentified words is one of the most important processes in human maturity. The major effect of vocabulary knowledge on second or foreign language erudition has been highlighted recently (Zahedi & Abdi, 2012). The use of vocabulary learning strategies is one critical factor that shapes the achievement of foreign vocabulary acquisition. It is vital that teachers give students the tools for acquiring their own rich vocabulary. Students will learn many words when they meet them within meaningful environments, but other words must be directly taught. vocabulary learning is incremental, potentially limitless, and heavily constrained by the learners' experience|| (Swain & Carroll, 1987, p. 193). A widespread idea within L2 pedagogy is the view that some L2 pupils are more successful than others. One rationale might be the fact that successful learners tend to approach the task of language learning with diverse and sometimes more effective strategies (Anderson, 2005; Nunan, 1999). Successful FL learners are familiar with the fact that to learn the form and meaning of a large number of FL words, for enabling to store up them in their memory and evoke them at will, and to determine how to utilize them properly in a variety of contexts and situations, they will have to trust on wide range of learning strategies. There is no doubt that when language learners are deeply engaged in the act of learning, learning takes place at deeper levels. Through drawing pictures such an engagement would occur, the researcher though, thus in the current study participants were asked to draw relevant pictures for new words. The researcher strongly believes that this strategy will enhance engagement and will increase learning.

INVOLVEMENT LOAD HYPOTHESIS

Involvement load hypothesis (ILH) was developed by Hulstijn and Laufer (2001) for L2 vocabulary learning. According to cognitive psychology, deeper elaboration of lexical information yield in better retention (Broeder and Plunkett 1994). They believe that tasks with different involvement load result in different incidental learning. It was claimed that retention of unfamiliar words is related to the amount of involvement during processing these words (as cited in Jing *et al.*, 2009). There is no doubt that depth of processing is the significant factor in learning words. Involvement load hypothesis is based on the structure of depth of processing that was developed by Craik and Lock hart (1970). Involvement load hypothesis is based on assumption that stimuli are processed at several levels, firstly at shallow levels and then at deeper levels. Shallow levels take action in superficial analysis of input (e.g. lines, pitch...). Later levels match new data against stored learning (Yaqubi *et al.*, 2010). Involvement load has important pedagogical implications, it helps us to control task features and decide on

what tasks would be more effective. Research indicates that degree of involvement differs according to the type of words. That is low involvement is required for easy words but not for difficult ones (Martinez- Fernandez, 2008). According to Tsubaki (2012) Involvement load hypothesis has several strengths (components), one of which is that, it includes need, secondly it includes search and evaluation. Need is a motivational factor. Some learners when motivated, are able to increase their vocabulary knowledge so quickly, also research shows that, motivation is one of the key factors in learning. Search and evaluation are cognitive dimensions (Tsubaki, 2012). Search occurs when learner should find the meaning of target items, or their forms, when seen in target notions. Evaluation means comparing a target word with other words. Laufer and Hulstijn came up with three components and also stated three degrees of value for each one, none, moderate, and strong (see Table 1).

Table. The Degrees of the Components in the Involvement Load Hypothesis

| Components | Degrees of the Involvement Load | Explanations |
|------------|---------------------------------|---|
| Need | Index 0 (None) | The learner does not feel the need to learn the word. |
| | Index 1 (Moderate) | The learner is required to learn the word. |
| | Index 2 (Strong) | The learner decides to learn the word. |
| Search | Index 0 (None) | They do not need to learn the meanings or forms of the word. |
| | Index 1 (Moderate) | The meaning of the word is found. |
| | Index 2 (Strong) | The form of the word is found. |
| Evaluation | Index 0 (None) | The word is not compared with other words. |
| | Index 1 (Moderate) | The word is compared with other words in the provided context. |
| | Index 2 (Strong) | The word is compared with other words in self – provided context. |

Source (Tsubaki, 2012)

Let's focus on the details of degrees. In classroom situation where learners have to learn target words for passing the exam 'need' is moderate since they are forced to learn. When learners decide to learn words for the sake of learning, 'need' is strong. In EFL situations because English is not used outside the classes, it is uncommon to have strong 'need'. The value of 'search' in EFL situations is moderate; since learners should find the meaning of words to understand texts. 'Evaluation' index is the most moderate one. Because materials are arranged by teachers in classrooms (Tsubaki, 2012). Hulstijn and Laufer (2001) believe that all the three components would not be present at the same time (during a reading-based task). There will be a combination of these three factors with their degree of prominence that results in Involvement Load (JTLS). Kim (2008) is one of the researchers who examined the Involvement Load hypothesis. Kim studied in two experiments. Subjects were selected at two proficiency levels in an ESL context. Kim's study is useful in that, Involvement Load hypothesis was supported regardless of learners' proficiency levels. Three levels of Involvement Load form the predicated outcomes; two tasks with same Involvement Load yielded the same amount of retention (Kim, 2008).

PICTURES AND VOCABULARY LEARNING

Pictures are instructional tools which are to be utilized in the process of learning in general in language learning in particular. One of the more widespread findings in recall research is that pictures are remembered better than words. For example, when shown a list of easily named pictures versus their equivalent verbal labels, contributors frequently have an easier time recalling the names of the pictures compared with the verbal labels (Paivio & Csapo, 1973). Jiang (2014) examined learning vocabulary through using pictures of which significant changes in vocabulary learning of the participants were reported. Hill 1990 on the role of pictures states that:

“The standard classroom” is usually not a very suitable environment for learning languages. That is why teachers search for various aids and stimuli to improve this situation. Pictures are one of these valuable aids. They bring “images of reality into the unnatural world of the language classroom” (p.1).

As said by more current research, the more sensory modes in which mental depiction is stored up, the more likely they will be recalled (Borsook & Higginbotham Wheat, 1992) Bagget 1989 (as cited in Canning, 1998) hypothesizes that images are stored in memory. These images include more information because they have more “cognitive pegs” that can be employed to make associative and referential associations between visual depictions and information held in long term memory. It was suggested that pupils utilize dual coding to build a mental model of the learning experience. Consequently, it can be drawn that visuals may remind relevant knowledge for those that have it to draw on. It is subsequently supposed that most learners will join together accessible symbol systems to construct a model of the situation as a strategy to reconstruct in their mind a picture image of an event. Zahedi and Abdi (2012) believe that semantic mapping is one of the most realistic methods that can aid learners of any level in learning vocabulary. They asserted that semantic mapping obtains the associations of a material to consciousness for deepening, receiving and learning vocabulary points. Semantic mapping yields in making webs for new word (Zahedi & Abdi, 2012). Shoari and Farrokhi (2014), also studied the effects of organizers in the form of the pictures and clusters in vocabulary learning, they reported noteworthy consequences of applying pictures in word achievement as well. They believe that remembering of one word reinforces the remembering of the other one; they also affirmed that it is of major effect on word recalling of students with learning disabilities given that they cannot make connections between words and relevant concepts. Semantic mapping is one kind of Graphic Organizers that is utilizing the cluster of words with their pictures when possible. Heidari and Araghi (2015), also have a comparative study on the effect of songs and pictures on word learning they also reported that pictures are significantly effective than songs in the process of word acquisition.

RESEARCH QUESTIONS AND HYPOTHESES

Q1. Does drawing picture have any effect on Iranian young EFL learners' vocabulary learning?

H₀1. There are no significant differences in the effect of drawing picture on Iranian young EFL learners' vocabulary learning.

Q2. Does drawing picture result in any improving Iranian young EFL learners' vocabulary learning?

H₀2. There are no significant differences in the effect of drawing picture on Iranian young EFL learners' vocabulary learning.

METHODOLOGY

Design of the study

The design of the current research is quasi-experimental, that is without randomization. The independent variable of the study was drawing relevant pictures and the dependent variable was vocabulary learning.

Participants

Sixty language learners with an age range of 6-10 partaken in this investigation of which lasted for one academic term. All the contributors were from Turkish background. They were picked from 4 classes. The participants were students of the one of the institutes of Karaj, Iran.

Instruments

For the sake of collecting quantifiable data the researcher utilized the following materials:

One language proficiency test of which was run before starting the program, a pre-test of which was conducted on subjects' word knowledge. All of the words were chosen from the term book of the pupils. And a post-test of which was for measuring the effectiveness of the drawing pictures.

Procedures

The researcher conducted- for assuring the homogeneity of the level of the participants before starting the study -one language proficiency test on Listening, Speaking, Reading, and Writing. After that one pre-test on word knowledge of the subjects was carried out for confirming the comparability of both groups. Then the program was started. In the experimental group the researcher provided the children with colorful notebooks and asked the learners to draw a relevant picture for each new word. By relevant it means in abstract words learners were to draw something more than a single word. The learners had no limitation in the kind pictures they need to draw for making sense of new words in effective manner. After 15 sessions, one post-test was ordered to both groups. The collected data has been analyzed using Statistical Package for the Social Sciences (SPSS).

RESULTS AND DISCUSSION

The answer for loaded question of the study is yes, since really the scores of the post-test in the experimental group changed significantly. Let's move to the second and the major question of this inquiry. It is worth to say that both groups were around the same level of the word knowledge at the beginning of the study it can be got from the means of both groups in pre-test for experimental group 12.17 and for control group it was 12.44 while in post-test that of experimental group enhanced to 16.66 with SD of 0.74, while in control group it remained approximately the same e.g. 12.53 with SD of .94.

Table 1. Paired Samples Statistics-Experimental Group

| | | Mean | N | Std. Deviation | Std. Error Mean |
|--------|----------|---------|----|----------------|-----------------|
| Pair 1 | Posttest | 16.6688 | 30 | .749558 | .13505 |
| | Pretest | 12.1711 | 30 | 1.16688 | .21487 |

Table 2. Paired Samples Statistics-Control Group

| | | Mean | N | Std. Deviation | Std. Error Mean |
|--------|----------|---------|----|----------------|-----------------|
| Pair 2 | Posttest | 12.5322 | 30 | .944287 | .16655 |
| | Pretest | 12.4433 | 30 | 1.06620 | .19477 |

In the following table it is quite evident that the experimental group unlike control group, high scored in the post-test.

Table 3. Paired Samples Test-Experimental Group

| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|-----------|-----------------------|--------------------|-------------------|-----------------------|---|---------|--------|----|--------------------|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | Posttest - Pretest | 4.66655 | 1.00520 | .18252 | 4.12091 | 4.84243 | 24.455 | 29 | .000 |

Table2 represents that the mean increase in Vocabulary scores was 4.66 with a 95% confidence interval ranging from 4.12 to 4.84. It is also specified that the mean enhancement in the vocabulary posttest was statistically significant ($t = (29) = 24.55$, $P = .000$). Therefore, the Null Hypothesis is rejected and the Alternative hypothesis is supported. Actually in none of the reviewed studies on the effect of pictures on vocabulary learning there was the act of drawing pictures (by the learners), all of them provided supports for the positive effectiveness of the pictures as instructional tools which are given by the educators. In the current study the researcher also has found strong supports for applying pictures but not in that form but in the form of being drawn by the learners. But generally speaking it can be said that the current study is in agreement with previously mentioned ones in the sense that it also supports the positive effects of pictures but in the form of the production not consumption.

CONCLUSION

This study suggests some critical points that are to be taken into account by language teachers and syllabus designers, first one and the most important one is the fact that drawing picture results in deeper engagement, it means through drawing pictures the relevant information of each words will be processed at deeper levels not at shallow levels. For instance if someone was shown a car without having chance to focus on, s/he would remember just some general features of that car, while if the same person had a chance to focus on it s/he would remember more details about it, that is processing would occur at deeper levels and more information on a word will be stored. The second point of which is mostly true with younger learners is the issues of self-confidence, it means when learners are asked to draw something to learn what are to learn, they feel doing something important and they feel more safe and confident, thus they will be more autonomous language learners/users. This strategy for teaching new words is of great importance for LDs (students with learning disabilities) since they experience deep problems in making connections among concepts, thus making sense of them and recalling them, when the situation requires. Therefore these learners through drawing pictures would be helpfully engaged in learning, they would be find the important connections between and among words and concepts. The last but not the least is that there is a really relaxed environment when drawing, because it is actually far from the stresses and anxieties of the normal classroom atmospheres. The first limitation of the present study was the number of participants, (larger populations are needed), the second point was time on task, e.g. in some cases learners when meeting an abstract word, asked more time to think on what to draw. The other point of which put an obstacle on generalizing the results is the issue of gender, because the current study was administered on female learners. The last one is that it seems this method of vocabulary teaching/learning is appropriate for younger learners and also for LD learners, e.g., learners with learning disabilities. For older ones it would be really difficult to apply.

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