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**Subject:**

**The Use of the Mnemonic Technique of  
Bizarreness in English Vocabulary Retention**

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IN THE NAME OF GOD

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BIZARRENESS IN ENGLISH VOCABULARY RETENTION**

BY

MANDANA HOMAYOUNI

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***DEDICATED TO***

***MY***

***BELOVED***

***FAMILY***

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## **ABSTRACT**

### **The Use of the Mnemonic Technique of Bizarreness in English Vocabulary Retention**

by

Mandana Homayouni

This study intended to investigate whether using bizarre pictures and stories for vocabulary instruction improves English vocabulary retention in children or not. In order to satisfy the need for more interesting and memorable ways of vocabulary presentation, the present study was carried out as a pioneer of its kind to try the bizarreness effect in L2 instruction. seventy three EFL students aged 6 to 12 were chosen from the beginners' level of Kish Language Institute. They were then divided into two groups; an experimental group (EG) and a control group (CG), to be taught forty common vocabulary items. Each group was taught vocabulary items in a special manner: the vocabulary was introduced to the EG by presenting bizarre pictures of the items first, then putting them in a bizarre context (story), and for the next session, the students were asked to create their own bizarre pictures and stories of the learned vocabulary; whereas in the CG, the vocabulary was introduced by presenting more ordinary pictures and stories. With an interval of 10 days (between the last presentation and the test), each group was tested in two ways: once with an oral recall test, and once with a written recognition test; and each test was administered to each group twice: first unexpectedly at the penultimate session and then with previous announcement at the last session. The scores of these tests were then analyzed to find the difference between the two groups. Based on the results of the MANOVA, it was concluded that the method in which bizarre pictures and stories were applied, had improved vocabulary retention for the EG over the CG in free recall tests as well as unexpected recognition test. By using the suggested method, in addition to long-term retention, the potentially boring learning activity would become more fun and more enjoyable.

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## **LIST OF ABBREVIATIONS**

**L1:** First language

**L2:** Second language

**EFL:** English as a foreign language

**EG:** The experimental group which was taught the vocabulary through using bizarre pictures and stories

**CG:** The control group which was taught the vocabulary through using common pictures and stories

**STM:** Short-Term Memory

**LTM:** Long-Term Memory

**MANOVA:** Multivariate Analysis of Variance

# CHAPTER ONE

## AN INTRODUCTION TO THE STUDY

### 1.0. Introduction

The first chapter of the present study includes five parts. The first part deals with the importance of vocabulary retention in language learning. Memory and mnemonics are discussed in this part as well. In the second part, the problem of the study is stated followed by the objectives and significance of the study. In the last part, an outline of the whole study is presented.

### 1.1. Preliminaries

Language is the human based means of communication, although not the only but certainly the most important one. The sentences uttered by people are themselves composed of some strings of smaller units called words. Wilkins (1987; p. 6) stated: "words are the smallest units capable of relatively independent occurrence. Hatch (1983, as cited in Oxford and Scarcella 1994; p. 231) also maintained: "Whenever in a new language communication becomes our primary goal, the lexicon of the language plays a crucial role, because we have little of the new language at our command. The words will make basic communication possible". Therefore, When someone knows that his command of vocabulary is rich enough to cope with a variety of situations, he feels more self confident and reliant.

Regarding vocabulary in another language, Wallace (1982, cited in Lessard-Clouston, 1994; p. 60) claimed:

“Not being able to find the words you need to express yourself is the most frustrating experience in speaking another language.” The tip of the tongue phenomenon is a good example for this claim.

Rivers (1983, as cited in Nunan 1991; p. 117) argued that for second language use, the acquisition of an adequate vocabulary is essential because we might not be able to use the structures we may have learned for comprehensible communication without an extensive vocabulary at our command”.

Thus, vocabulary is believed to be a basic component of language. It has been constantly demonstrated that mastering good fluency in the use of language in the four skills (reading, writing, listening, and speaking) is strongly related to the number of vocabulary items learned or at hand. Actually, how well someone performs on different skills and other components of language directly depends on vocabulary knowledge. In the field of language teaching and learning, vocabulary learning is considered by many to be the single most important aspect of foreign language learning (Crow 1986, and Nunan 1988, both cited in Knight 1994, p. 67). The majority of students studying language, cite vocabulary as their number one priority. It is also a priority of the teachers as well. Fortunately, the need for vocabulary learning is a point on which teachers and students agree (Allen, 1983).

Oxford and Crookal (1990, p.9) stated: “given the difficulties of vocabulary learning in the second or foreign language, along with obvious necessity of trying to overcome them, one would accept that vocabulary instruction would be at the top of the agenda for language teachers.” However, teachers need more help with vocabulary than they receive. Different approaches are suggested for vocabulary teaching. For example, Hunt and Beglar (2002) discuss three approaches to vocabulary teaching: incidental learning (learning

out of formal situation or language classrooms), explicit instruction (learning out of formal situation or language classrooms), and independent strategy development. They recommend a combination of all three approaches as the basis for any vocabulary teaching program (Richards and Renandya, 2002). Nation and Meara (2002, as cited in Nation 2005), on the other hand argue for a systematic rather than incidental approach to teaching vocabulary. They introduce four strands of vocabulary learning: learning vocabulary from meaning-focused input (listening or reading), learning vocabulary from meaning-focused output (speaking or writing), deliberate vocabulary learning (direct vocabulary learning), and developing fluency with vocabulary (through repetition or making many association).

Despite all these strategies, forgetfulness still exists and bothers language learners and teachers, especially in the domain of vocabulary learning. In other words, these are all approaches to vocabulary teaching, which lead to vocabulary learning. According to Ebbinghaus (1885, cited in Idoine-Shirai 2007) nonsense syllables were lost from memory in his "forgetting curve" study. The majority of the "words" were lost within a short time and after 1 week only 25% remained. For many low-level students, English learning involves many nonsense words and syllables, so their memory would degrade in the same way. Thus, we have to avoid confound between learning and retention of vocabulary, because learning and remembering are two different concepts (knowlton and Squire, 1995).

According to Nissen (2005), learning in general, involves perception, comprehension, retention and recall. Thus, comprehending the meaning is only the first step of learning the word, more time should be given to activities which help its storage, and recall. Forgetfulness is a point that most language learners complain about, specially in the vocabulary domain.

Brian and Eastmond (1994, as cited in Sharifian, 2002, introduction, para. 1) state that instruction of any sort is concerned with the human cognitive system, and thus an understanding of how the cognitive system works contributes to the effective design of instructional materials. As Brunning, Schraw, and Ronning (1999, cited in Sharifian 2002, introduction, para. 1) put it: "There are very few educational decisions to which the cognitive issues of memory, thinking, and problem solving are not relevant".

In order to answer the question about why information is forgotten, an understanding of memory – as the most involving cognitive system - is needed, because the study of memory is also the study of forgetting, and the more one knows about their memory, the better they will understand how they can improve it

#### **1.1.1. Memory and Mnemonics**

As Eysenck (2000 in Eysenck and Keane 2000) stated:

"Memory is a mental activity for recalling information that has been learned or experienced. It involves encoding (how memories are formed), storage (how memories are retained), and retrieving data (how memories are recalled)—much like our computers."

A number of models are suggested for information storage in memory, and the most accepted one is the theory of triple memory by Atkinson and Shiffrin (1970, cited in Hergenhahn and Olson 2001, p. 178). This model states that there are three stages of memory storage: sensory store, short-term store, and long-term store. These stages differ from each other in terms of capacity and length of information retention. The model maintains that the information should be stored in the long-term memory in order to be retrieved when needed.

According to this model of memory, the question of forgetting can be answered in the following way; In most of the cases when something is to be memorized, it is stored in the short-term memory instead of the long-term memory, and therefore causes frustration when after a period of time it can't be remembered at all. This problem is seen in the domain of foreign language learning as well. Learners assume that they have learnt the vocabulary but after a period of time they find that it is gone and can not be used any more.

Therefore, in any sort of learning some strategies are needed to send the new coming information into the long-term memory. So, what is needed is to find a way, which helps the learners to send the information to the long-term memory first and then to enable them to have easy access to information at the retrieval time. It means that, any information has to be stored in the long-term memory in order to be retrieved when needed; a task that demands more cognitive effort than merely memorizing the information. A number of strategies are suggested to help enhance information storage in the long-term memory:

1. Rehearsal and repetition, which will first help keep the information in the short-term memory and second help transfer information to the long-term memory. This process is less effective and more boring as compared to other ways of sending information to the long-term memory (Zechemeister and Nyburg, 1982).

2. Elaborating information is another way of keeping information in mind which is defined by Woolfolk (1993, cited in Hergenhahn and Olson 2001, p.178) as adding meaning to information through associating new and old information. He believes that this strategy is very effective for information storage in the long-term memory.



3. Organization is a determining factor in information retention. Organized information are clearly better recalled than a mass of information. This organization is based on differences and similarities of the materials (Bower, Clark, Lesgold, and Winzenz 1969 cited in Hergenhahn and Olsen 2001).

4. Another strategy is the use of mnemonics, which will be discussed in more detail in the next section.

#### *1.1.1.1 Mnemonics*

The word "Mnemonic" has come from the Greek word "Mnemosyne", the name of Greek goddess of memory. Mnemonics are systematic procedures for enhancing memory, and are of two types: verbal mnemonics and imagery mnemonics. Mnemonics are mostly imagery-based, in which mental imagery with special characteristics is used to help the storage of information in the long-term memory. The verbal form is the verbal description of this image.

According to Gray (1997), the idea behind using mnemonics is to encode difficult-to-remember information in a way that it is much easier to remember. Many such techniques are used by L1 speakers to help them remember important information. However, for foreign/second language learners, the use of such techniques has not been much encouraged.

#### **1.1.2 Foreign/Second Language Learning and Mnemonics**

When the use of mnemonics in language learning becomes the issue, the only method that comes into mind is the keyword method. In the keyword method, the foreign word is remembered by being linked to a keyword, which is a sound-alike native word. It is believed that the stimulus of the foreign word would activate the sound-alike keyword, which would in turn activate the interactive image or sentence, resulting in the retrieval of the real meaning (Gu, 2003).

However this method is criticized because of a number of reasons (One reason is that this technique mainly aims for the retention of paired-associates. It will be discussed in details in chapter two). Nevertheless, other types of mnemonics can still be applicable in language learning. Actually, there are a number of similarities between language learning strategies and mnemonic techniques. One of them is using images for learning.

Using images as encoding aids is what is done in many foreign/second language classes in order to teach foreign words. The word is introduced by presenting its picture. This way, according to the dual coding theory (discussed in chapter two in details), both hemispheres of the brain are involved to get better learning results. This method is especially effective with young children (Allen, 1983). This fact is also supported by Piaget's (date) stages of development Piaget believed that children at a certain age (6-12) need pictures for more effective learning. Apart from the dual-coding theory and developmental stages, it is accepted in cognitive psychology that children grow up expecting their world to be visual, and indeed, part of the process of leaning involves using visual clues to support the verbal form (Wright 1994). In this regard, Kieras (1978) stated:

"The more images in mind, the better recall of words".

Therefore, using pictures as visual aids in the foreign/second language classroom, is supported by cognitive psychology, and also it is consistent with memory enhancement principles.

Another application of images as mnemonics is to make them bizarre; a technique not usually considered in pictures used in language classrooms. The "bizarreness effect" refers to the superior recall of stimuli that have bizarre, atypical referents. This strange and implausible relation between stimulus

elements is suggested to aid in retrieval of items (McDaniel & Einstein, 1986). Gombrich (1972, as cited in Merry and Graham 1978, p. 315) also believed that strange and implausible relations between stimulus elements aid retention of image in the mind, therefore the more bizarre and unlikely, the better. The information is therefore accessed more quickly, and this will help learners recall the material easier. Bizarre images are more easily accessed relative to common ones, and as mentioned, for any kind of recall, this access is necessary (McDaniel and Einstein 1986). Past research has shown that bizarre imagery facilitates recall (Merry and Graham 1978; Merry 1980; O'Brien and Wolford 1983; Kroll and Schepler 1985; Pra Bald, *et. al* 1985; McDaniel and Einstein 1986; Iaccino 1988 and 1996; Nicolas and Marchal 1998; Waddill and McDaniel 1998; McDaniel and Dornburg 2005; Macklin and McDaniel 2005).

By 1981, the bizarreness effect had become a controversial issue in memory experiments but the results of the conducted studies were contradictory. Wollen and Cox (1981), O'Brien and Wolford (1982), McDaniel and Einstein (1986), Iaccino and Spirek (1988), and other researchers conducted a number of studies to determine why bizarre imagery facilitate recall in some studies but not in others. The conditions for the bizarreness effect to take place, according to the results of their studies are: delayed testing, unexpected testing, recall test rather than recognition test, free-recall rather than cued-recall, presentation of enough number of items, and mixed context. Bearing in mind these influential factors, from then on, the studies (such as Merry and Graham, 1978, and Merry, 1980; O'Brien and Wolford, 1982) McDaniel and Einstein, 1986; McDaniel and Dornburg, 2005) were all in favor of the effectiveness of the bizarreness effect in information retention. These contradictory findings lead us to the present study which focuses on the effectiveness of the bizarreness effect on L2 vocabulary retention, and will be discussed in more detail in the next section.

## **1.2. Statement of the problem**

Based on the findings discussed by now, the present study tried to investigate the contribution of bizarre images (as special memory aids to help information storage in the long-term memory) to children's concrete English vocabulary retention. The question is:

“Can bizarreness, as a factor which enhances information retention in L1, increase information retention in L2 as well?”

For this purpose, bizarre pictures and stories were presented to a group of children (the experimental group) as special visual aids, and then they were asked to create bizarre mental images, draw and color their mental image as a vocabulary exercise. As such, because of the bizarreness effect, pictures are expected to retain in their memory for a long time, be accessed easier, and therefore be recalled better. This group was then compared to a control group in which the same items were presented in a common context in which ordinary pictures and stories were presented to the students.

## **1.3. Objectives of the study**

The present study aims at exploring and evaluating the contribution of using the mnemonic technique of bizarreness to improve English vocabulary retention in children. The study seeks to answer the following questions:

1. How different are the two (experimental and control) groups' performances on an unexpected free-recall test?
2. How different are the two groups' performances on an expected delayed free recall test?