In the Name of the Lord, Who Was All

Wise prior to the Creation of Wisdom

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The Effect of Peripheral Learning on Vocabulary Acquisition, Retention and Recall among Iranian EFL Learners

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Abstract

This study is an attempt to investigate the effect of peripheral learning on Iranian EFL learners' vocabulary acquisition, retention and recall. For the purpose of this experiment, a sample English language proficiency test was administered to a total of 200 Iranian EFL learners, among whom 80 homogeneous intermediate participants were selected. Then, they were randomly divided in two groups, namely, experimental and control groups. Before starting the treatment, a validated content-based test in terms of the materials supposed to be covered in both groups was administered to them as the pre-test. Having taught the same content to both groups, the researcher applied a specific treatment to the experimental group, i.e. words having received the least correct answers in the pre-test accompanied with their pictures were prepared in power point format and shown peripherally in the classroom while the teacher was teaching her usual lesson conventionally without paying any attention to what was being shown in the periphery. That was while in the control group the same material was taught only conventionally, without any special treatment. Three post-tests were administered to the both groups under study in regular time intervals after the treatment, namely immediate recall, delayed recall and retention test, respectively. The collected data were run through statistical-tests such as repeated measures MANOVA and MANCOVA to be compared. The findings demonstrated a significant difference between the two groups for each post-test. Moreover, by analyzing the results it was revealed that the peripheral exposure of vocabulary to the participants, having led to the learners' peripheral learning had been significantly effective in learners' vocabulary acquisition, retention, and recall.

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Chapter One

Introduction

1.1. Preliminaries

A classic issue faced by researchers attempting to understand the fundamental laws of learning is whether there is more than one basic learning mechanism. Can all of the phenomena of learning be accommodated by a unitary mechanism, or do we need to consider the existence of independent and dissociable human learning systems?

There are two popular views on what it means to learn a second language. One view holds that it means months and even years of 'intentional' study, involving the deliberate committing to memory of thousands of words, their meaning, pronunciation and spelling. The other view holds that much of the burden of intentional learning can be taken off the shoulders of the language learner by such processes as 'incidental', 'implicit', 'accidental', 'subconscious', or 'peripheral' learning which involve picking up of words, grammar, and sentence patterns simply by engaging in a variety of communicative activities during which the learners may hardly use their focal attention or their complete awareness.

This section focuses on seven areas. Initially, it offers explicit definitions for implicit and incidental learning, and then, it clarifies subliminal perception. Next, it deals with the

problems raised, and explains the significance of the study. The chapter ends by defining the important technical terms followed by the delimitations set on the study.

1.2. Definition of key terms

1.2.1. Definition of peripheral learning

The term 'peripheral' carries the meaning of everything happening in the margin rather than the core or centre. 'Peripheral learning' refers to a sort of perception that occurs implicitly and incidentally as a result of continuous exposure to the increasing quantity of information (Taylor,1990).This way of perceiving makes it possible for learners to absorb through a bottom-up form of data processing a kind of information that seems too weak to be perceived in conventional ways. The concept of peripheral learning is a case of considerable interest in every educational field, because it
suggests the metaphorical idea of learning by attention to the margin, a deviation from what usually goes on in conventional classrooms where learning is supposed to take place by attention to what is offered in the core. Such a diversity best suits the taste of modern learners who are reluctant to bear much burden to acquire knowledge.

Peripheral learning is regarded to be implicit as opposed to explicit learning, and incidental as opposed to intentional learning. It is implicit since it is implied and happens indirectly, and it is incidental, because it occurs naturally and unintentionally. It is also regarded as a sort of subliminal perception, since in its most forms it takes place below the learners' absolute threshold for conscious perception.

1.2.2. Definition of implicit learning

Implicit learning is indeed learning of complex information in an incidental manner, without awareness of what has been learned or without complete verbalisable knowledge of what is learned. It may require a certain minimal amount of attention and may depend on attentional and working memory mechanisms (Shanks and Johnston, 1999). The result of implicit learning is implicit knowledge in the form of abstract (but possibly instantiated) representations rather than verbatim or aggregate representations (Cleeremans, 1997).

Some examples from daily life like 'learning how to ride a bicycle or learning to swim' can be given to demonstrate the nature of implicit learning and its mechanism. There are clear similarities between implicit learning and implicit memory. It has been claimed that implicit learning differs from explicit learning in terms of the presence or absence of consciously accessible knowledge (Merikle, 1990). Much evidence supports the distinction between implicit and explicit learning. Researches on amnesia often show intact implicit learning but impaired explicit learning. In addition, brain areas involved in working memory and attention are often more active during explicit than implicit learning (Reber, 1967).

1.2.3. Definition of incidental learning

Incidental learning is some form of indirect additional unplanned learning within an informal or formal learning situation (Schneider, 2009).

Incidental learning is also referred to as random learning; the latter term is used by UNESCO: “Random learning refers to unintentional learning occurring at any time and in any place, in everyday life. Incidental (random) learning is characterized as unorganized, unstructured and unintentional. This sets it apart from informal learning (using UNESCO's terms), which is intentional.

While we learn 'formally' only in some very specific situations and periods of our life (school, training), incidental and informal learning are much more important for most of the skills and knowledge we learn during the vast majority of life (Borer).

Incidental learning is unintentional or unplanned learning that results from other activities. It occurs often in the workplace and when using computers, in the process of completing tasks (Baskett, 1993; Cahoon, 1995). It happens in many ways: through observation, repetition, social interaction, and problem solving (Cahoon, 1995; Rogers, 1997); from implicit meanings in classroom or workplace policies or expectations (Leroux & Latleur, 1995); by watching or talking to colleagues or experts about tasks (Tilaart1, 998); from mistakes, assumptions, beliefs, and attributions (Csech, Watkins & Marsick, 1999); or from being forced to accept or adapt to situations (english1999). This "natural" way of learning (Rogers, 1997) has characteristics of what is considered most effective in formal learning situations: it is situated, contextual, and social.

Here is an example that shows the difference between incidental and informal learning: “Lifelong learners may attend organized and structured courses (non-formal education) or learn a foreign language from a private tutor (informal learning), both being intentional. This is different from incidentally discovering how to open a .zip file, while downloading learning material from the Internet.”

1.2.4. Definition of subliminal perception

Subliminal perception occurs whenever stimuli presented below the threshold for awareness is found to influence thoughts, feelings, or actions (Sadana, 1990). The term subliminal perception was originally used to describe situations in which weak stimuli were perceived without awareness. In recent years, the term has been applied more generally to describe any situation in which unnoticed stimuli are perceived (kazdin, 2000).

The concept of subliminal perception is of considerable interest because it suggests that peoples' thoughts, feelings and actions are influenced by stimuli that are perceived without any awareness of perceiving. This interest was reflected in some of the earliest psychological studies conducted during the late 1800s and early 1900s. In these early studies, people were simply asked whether or not they were aware of perceiving. For example, visual stimuli such as letters, digits, or geometric figures were presented at such a distance from observers that they claimed either not to see anything at all or to see nothing more than blurred dots. Likewise, auditory stimuli such as the names of letters were whispered so faintly that observers claimed that they were unable to hear any sound whatsoever. To test whether these visual or auditory stimuli may have been perceived despite the statements to the contrary, the observers were asked to make guesses regarding the stimuli. For example, if half the stimuli were letters and half the stimuli were digits, the observers may have been asked to guess whether a letter or a digit had been presented. The consistent result found in these early studies was that the observers' guesses regarding the stimuli were more correct than would be expected on the basis of chance guessing. In other words, despite the observers' statements indicating that they were unaware of perceiving the stimuli, their guesses indicated that they did in fact perceive sufficient information to make accurate guesses regarding the stimuli. Over the years, there have

been literally hundreds of studies following a similar format. Taken together, these studies show that considerable information capable of informing decisions and guiding actions is perceived even when observers do not experience any awareness of perceiving.

1.3. Statement of the problem

The educational scholars' main concern has always been to propose appropriate methods and techniques that best satisfy the learners' needs and interests. The need for variant methodologies has always being considered by those who involve in language teaching profession. There are many methods of teaching languages. Some have fallen into relative obscurity and others are widely used; still others have a small following, but offer useful insights. Each student learns differently, and one method may not fit all learning styles or situations. In addition, cultural preferences often extend to the way students are comfortable learning, and they may favor one method over another.

The new generation who have been raised and grown up in a modern technological environment, are reluctant to get entangled in a suffocating room, be set in melancholic rows of traditional benches in stuffy conventional classrooms, and focus their attention on a constant speaker in the centre. Modern learners do not have the stamina to keep being completely alert and concentrated all during a scientific lecture. They are used to picking up junks of knowledge while playing computer games, browsing in the net, or dealing with various digital instruments which give them the opportunity of indulging in a virtual world. They are mean in paying their attention to or keeping their mind focused on a course matter. They have rather got accustomed with learning from the environment.

As a consequence, this study is an attempt to offer a way to make it possible for the learners, in general, and EFL vocabulary learners, in particular, to acquire knowledge in the peripheral context without having to be completely concentrated and focused on the material.

To this aim, the present study is motivated to answer the following questions:

1. Does peripheral vision lead to peripheral learning?
2. Is the material acquired through peripheral learning readily retrievable?
3. Does the peripheral exposure to vocabulary lead to better retention?

4. Does the peripheral display of material not lead to the learners' distraction?
5. To what extent can the professional context impact learning?
6. Can the instructor have any control over the learners' peripheral learning?

Following the above questions are the hypotheses upon which the research was carried out.

H01. There is no significant difference among Iranian EFL learners in vocabulary acquisition under peripheral and non-peripheral conditions.

H02. There is no significant difference among Iranian EFL learners in the retention and recall of vocabulary under peripheral and non-peripheral conditions.

1.4. Significance of the problem

A quest for better methods has always been a preoccupation of teachers and applied linguists. To meet such a goal, many theories about the learning and teaching of languages have been proposed so far. These theories, normally influenced by the developments in the fields of linguistics and psychology, have inspired many approaches to teaching second and foreign languages. However, there is no single 'best' way of teaching foreign languages. The successful language teacher will not limit himself to one method per se, excluding all others. He must be always in search of the most appropriate ones.

On the grounds of the importance of introducing and performing modern educational methodologies and techniques in general, and the ones carried out assisted by variant means of modern technology in particular, and inasmuch as this study deals with the exploitation of subconscious mind in education, which is a controversial issue, the findings of this experiment will be of invaluable significance to the field of language pedagogy and psychology. This study will shed light on peripheral learning, and highlight its impact on vocabulary acquisition, which is regarded as one of the most important phase of foreign language learning. Besides, it will investigate the ability of learners experiencing this route, in vocabulary comprehension, retention and recall.

1.5. Organization of the study

This study is organized along five chapters. The first chapter introduces the concepts of peripheral learning, besides clarifying implicit and incidental learning, accompanied by perceptible explications on subliminal perception, of which peripheral learning would be a form. The problems to be worked out, the purpose and significance of the study, the key terms employed in the research, and the delimitations existing are also subject to discussion in this part. Chapter two offers an exhaustive account of the definitions, classifications, and clarifications of implicit, incidental and subliminal learning, besides mentioning their application in vocabulary acquisition. Furthermore, this chapter bears on a number of studies on the mentioned subjects. Chapter three details the methodology used in conducting the study. Chapter four comprises the analysis of data and the results. And the last chapter embraces the discussion and implications of the study for those interested in educational matters.

1.6. Delimitations

The present study has attempted to shed light on the way subconscious mind and peripheral vision can be counted on for an educational purpose, namely vocabulary acquisition, also the quantity and quality of vocabulary knowledge retention, and learner's ability to recall it. Due to the deficiency of facilities, and the shortage of time, this study has disregarded such variables as gender, the geographical location of the learners, motivation and their attitude towards language learning, and has only focused on participants' language proficiency. It must be noted that just intermediate students are subject to test, and the other levels of language proficiency are overlooked.

Chapter Two

Review of Literature

2.1. Introduction

As it was mentioned before, peripheral learning is regarded to be incidental as opposed to intentional, and implicit as opposed to explicit learning. It is also considered as a sort of subliminal perception. Therefore, this section is to define and clarify the concepts of incidental and implicit learning, as well as that of subliminal perception, and then, prove theoretically that these phenomena can happen in the process of vocabulary acquisition. Meanwhile, a review of the literature including a sequence of researches carried out by many scholars on each field, and the ones accomplished to prove the relationship between the concepts is offered.

So, the chapter opens up with the definition of incidental learning and a description of its nature. Following it, the leading researches done on incidental learning are brought up, and then, incidental learning of L2 vocabulary is set forth. Next, implicit learning is introduced followed by some findings as its pieces of evidence. Moreover, the distinction between acquisition and learning based on the related Stephen Krashen's hypothesis is propounded. Then, some theoretical concepts and discussions are mooted to prove the occurrence of implicit learning during the process of incidental vocabulary acquisition based on Elis' model. Finally, subliminal perception, followed by its history and related theoretical concepts are dealt with, accompanied by Schmidt's notion that illustrates incidental, implicit and subliminal learning, as different aspects of peripheral learning, and as the products resulted from various levels of the same category.

2.2. Definition of incidental learning

Incidental learning is unintentional or unplanned learning that results from other activities. It occurs often in the workplace when using computers, in the process of completing tasks (Baskett 1993; Cahoon 1995). It happens in many ways: through observation, repetition, social interaction, and problem solving (Cahoon 1995; Rogers1997), from implicit meanings in classroom or workplace policies or expectations (Leroux and Lafleur 1995); by watching or talking to colleagues or experts about tasks (van Tillaart et al. 1998); from mistakes, assumptions, beliefs, and attributions (Cseh, Watkins, and Marsick 1999); or from being forced to accept or adapt to situations (English 1999). This "natural" way of learning (Rogers 1997) has characteristics of what is considered most effective in formal learning situations: it is situated, contextual, and social.

Incidental learning can result in improved competence, changed attitudes, and growth in interpersonal skills, self-confidence, and self-awareness (McFerrin 1999; Mealman 1993; Ross-Gordon and Dowling 1995). However, not all unplanned learning is effective. Ford and Herren (1995) and Leroux and Lafleur (1995) highlight the "hit or miss" nature of incidental learning, and Dodge (1998) reports more serious consequences, for example, in the "learned" subversion of occupational safety practices in the workplace.

Incidental learning is often not recognized or labeled as learning by learners or others

(Ross-Gordon and Dowling 1995), and thus it is difficult to measure and harness for use. However, "unintended consequences of a learning situation are often more important to the learner than the original objectives" (McFerrin 1999, p. 1). Adult learners often do not distinguish between formally and incidentally acquired learning (Mealman 1993) or prefer incidental learning opportunities to formal ones (Cahoon 1995; Ross-Gordon and Dowling 1995). Seniors in Woods and Daniel's (1998) study retained incidental learning that was personally meaningful.

2.3. Research on incidental learning

In this section, major references on incidental learning will be uncovered and examined. The references will be analyzed in several ways, including an analysis of the conceptualization of incidental learning, the type of study conducted, the rigor of the approach and the thematic focus of the research. However, among the leading approaches to incidental learning, the ones focusing on computer studies and those dealing with workplace learning have already proved to be the most informative approaches for analyzing the data. The analysis focuses on understanding how incidental learning is defined and conceptualized.

2.3.1. Computer-related studies of incidental learning

A major category of studies on incidental learning involves the study of computer-based systems. Computers have been studied in several ways: incidental learning as a means to learn to use computers or computer software (such as the internet); incidental learning in systems designed for instructional purposes; and incidental learning that occurs when using computer applications (e.g. discussion groups; games). This research seems to take a broader look at incidental learning than found in the information-seeking studies. Cahoon (1995), for example, incorporated computer skills learning and development of assumptions, beliefs or attributions that lead to a socialization process. In the first instance, he notes, we may explicitly learn computer skills when we need to perform a specific computer function for a task, or we may implicitly absorb ideas about the computer through observation and repetition. In the latter instances, we may learn that computers are good or bad, a status symbol or a character flaw. Cahoon states: "Incidental learning episodes, over