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A Thesis Submitted to the School of Graduate Students in partial Fulfillment of the
Requirements for the Degree of Master of Arts (MA)

**The Effect of Schema Activation and Schema Theory-Based Pre-reading
Activities on Enhancing EFL Readers' Comprehension**

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September 2010

In the Name of God

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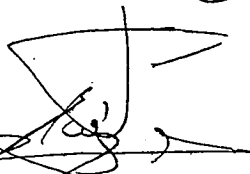
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*Evaluated and Approved by the Thesis Committee:
Excellent*



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September 2010

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To

My dear Family to whom I owe the

blessing of a successful life and to my dear

Husband, who offered me spiritual support

and encouragement throughout my career

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Abstract

Reading comprehension is one of the main purposes of EFL teaching/learning. According to Ajideh (2006), in most cases a common problem students experience in reading classes is the feeling that they know absolutely nothing about the subject they are reading about. This problem may not be due to the lack of background knowledge, but rather due to the failure to activate that knowledge. In other words, second language readers will need to draw on appropriate schematic knowledge to reach the satisfactory interpretation of the text. The present study has attempted to investigate the effect of schema activation by exploring the effectiveness of two kinds of pre-reading strategies (schema-theory-based pre-reading activities and text-based ones) on reading comprehension of Iranian intermediate EFL learners. In this study the ninety EFL learner's being of the same proficiency level, attending three intact classes, were randomly assigned to three different conditions: Schema theory-based pre-reading activities, text-based linguistic pre-reading activities, conventional-type reading activities. The first two classes served as the experimental groups and the last one as the control group. During the treatment, the experimental group A received schema theory-based pre-reading activities, while the experimental group B received text-based linguistic activities. In the control group, however the students were not instructed to use any certain pre-reading strategy. Before beginning the instruction and also after finishing it, students in all groups were given a pre and a post-test. The results indicated that students who were instructed to apply these pre-reading strategies outscored the students who were taught through applying a conventional type of reading approach _that is: without using certain pre-reading strategy_ in the reading comprehension post-test that all the groups were given at the end of the treatment. Moreover, the experimental group A, who had applied a schema theory-based pre-reading strategy, outscored the experimental group B, who having applied a text-based pre-reading strategy.

Keywords: Schema theory; schema activation; schema-theory-based pre-reading strategy; text-based reading strategy.

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CHAPTER ONE

INTRODUCTION

1.1 Overview

Our understanding of reading both in terms of theory and practice has changed considerably. In the mid to late 1960s, reading was seen as little more than a reinforcement for oral language instruction. Under the influence of audiolingualism, most efforts to “teach” reading were centered on the use of reading to examine grammar and vocabulary or to practice pronunciation (Grabe, 1991). In other words, for a long time, reading was traditionally viewed as a bottom-up process in a word-sentence-passage sequence, in which readers decode the text and rebuild what the writer wants to convey. Accordingly, reading teaching becomes teaching of language points known as grammar and vocabulary. When students have problems with comprehending the text, they are told that they fail because of their poor grammar or limited vocabulary. Consequently, people are misled to believe that the only approach to an effective reading is enlarging vocabulary and mastering grammatical rules (Huang, 2009).

As Grabe (1991) has argued, through the early to mid 1970s, a number of researchers and teacher trainers argued for the greater importance of reading. By the mid-to late 1970s many researchers began to argue for a theory of reading based on work by Goodman (1967) and Smith (1971). Carrell and Eisterhold have discussed that EFL/ESL reading theory has been influenced during the past decades by Goodman (from the mid to late 1970s) who views reading as a “guessing game” in which the “reader reconstructs, as best as he can, a message which has been encoded by a writer” (1983, p. 554).

The research and persuasive arguments of Goodman and Smith evolved into a “psycholinguistic model of reading”. Goodman’s research led him to propose that reading is not primarily a process of picking up information from the page in a letter-by-letter, word-by-word manner. Rather, he argued that reading is a selective process. It means that good readers used

knowledge they brought to the reading and then read by predicting information, sampling the text, and confirming the predictions. Smith concurred with Goodman's arguments that reading was an imprecise, hypothesis-driven process (Grabe, 1991, p. 376).

As Xiao-Hui, Jun, and Wei-Hua (2007) have stated, the study of reading comprehension is an area that is very important for language learning and teaching. The reason for its importance is related to the fact that reading is the major way to learn English and also that reading ability has always been viewed as critical to academic success.

Any attempt to explain the processes whereby the text is understood entails a profound understanding of cognitive processes in which knowledge is represented, processed, and used in comprehension (Nassaji, 2002). Text comprehension, as stated by Yazdanpanah (2007) is a complex cognitive skill in which the reader should construct meaning by using all the available resources from both the text and previous knowledge. These resources assist readers in utilizing lexis and syntax, retrieving their meanings from one's mental lexicon, making inferences, and employing schemata. The correct implementation of these resources can help readers in the successful comprehension of the text. This view is in same line with Carrell's (1987) which stated that reading comprehension is a process of constructing meaning from written text based on a complex coordination of a number of interrelated sources of information.

In an excellent review of the developments in second language reading, Grabe (1991) points out that the crucial importance of reading skill in academic contexts had led to considerable research on reading in second language. Research on reading has attempted to look for components that affect reading performance as well as reading behaviors that distinguish proficient from less-proficient readers. Gender, prior knowledge, interest, and language ability

have been seen as amongst the major factors that influence reading comprehension performance (Brantmeier, 2001, 2003; Bugel & Bunk, 1996; Pae, 2004).

As it was mentioned, reading comprehension is one of the main purposes of ESL teaching/learning. In brief, there are two main outlooks on reading. The first, a product-oriented approach to reading, assumes meaning exists in the text itself, and it is text-based factors that determine meaning of difficult words or complex structures. Whereas, for the second, the process-oriented approach to reading, meaning is obtained through a successful interaction between the reader and the text, and it is inside-the-head factors that play an important role in comprehension. Accordingly, background knowledge will be of primary importance for ESL readers (Ajideh, 2003). Researchers in both first and second language reading have argued against the view that texts are self-contained objects, the meaning of which, it is reader's job to recover, texts do not contain meaning; rather, they have potential for meaning. This potential is recognized only in the interaction between the text and the reader. That is, meaning is created in the course of as the reader draws both on existing linguistic and schematic knowledge and input provided by the printed or written text (*ibid.*).

As early as 1781, Immanuel Kant claimed that new information, new concepts, new ideas can have meaning for an individual only when they can be related to something the individual already knows. More recently, Anderson, Reynolds, Schallert, and Goetz (1977, p. 369, cited in Carrell, 1984, p. 332) have restated this notion: "every act of comprehension involves one's knowledge of the world as well." Carrell (1984) continued that this truism has often been neglected by those involved in studying and teaching second languages. In traditional views of second language comprehension, emphasis has been exclusively on the language to be comprehended and not on the comprehender. In these essentially "linguistic" views of

comprehension, each word, each well-formed sentence, and every well-formed text “has” a meaning. Meaning is conceived to be “in” the text, to have a separate, independent existence from the reader.

After decades of study, reading researchers generally have come to an agreement that reading is an interactive process, involving lexical, semantic, syntactic, and word knowledge. However the extent to which each component affects reader's comprehension and their use of strategies to comprehend remain unclear (Al- Shumaimeri, 2006). According to Al-Issa (2006), reading is a multileveled and interactive process in which readers construct a meaningful representation of text using their schemata.

An important aspect of cognitive science, schema theory is a theory of how knowledge is acquired, processed, and retrieved. Schema is a technical term used by cognitive scientists to describe how people process, organize, and store information in their heads. Schemas, or schemata, are seen as cognitive constructs by which we organize information in our long-term memory (Widdowson, 1983). They "reflect the experiences, conceptual understanding, attitudes, values, skills, and strategies ... [we] bring to a text situation" (Vacca & Vacca, 1999, cited in Al-Issa, 2006, p. 41).

According to schema theory, our system contains “an enormous number of schemata” (Rumelhart & Ortony, cited in Al-Shumaimeri, 2006, p. 4). Each schema contains many components, parts, or slots, which are hierarchically linked, representing the relationships among the components relative to the schema in question. If new information is incompatible, the reader makes inferences on the basis of the selected schemata in order to fill in the missing parts. Nassaji (2002) believes that schema theory gives perception into how the reader's previous knowledge interacts by often activating information that is relevant to the problem to be solved.

According to Anderson et al. (1977, cited in Carrell & Eisterhold, 1983, p. 73) schema theory is based on the belief that “every act of comprehension involves one’s knowledge of the world as well”. Thus, readers develop a coherent interpretation of text through the interactive process of combining textual information with the information a reader brings to a text (Widdowson, 1983).

Schema theory proposes that readers possess different conceptual frameworks, called schemata, which they bring to reading of a text and which they use to make sense of what they read. Such schemata are used by readers in interactive, bottom-up and top-down processes to check their understanding of the texts and to clarify ambiguities. Efficient readers use prior knowledge of content and textual features stored in schemata to make meaning out of the text (Ajideh, 2003). According to Brown (2001) the hallmark of schema theory, with regard to reading, is that a text does not by itself carry meaning. The reader brings information, knowledge, emotion, and culture – that is schemata – to the printed word. More information is contributed by the reader than by the print on the page. This would all seem to point to the fact that our understanding of a text depends on how much related schema we, as readers, possess while reading. Consequently, readers’, natives and non-natives, failure or confusion to make sense of a text is caused by their lack of appropriate schemata that can easily fit with the content of the text.

Based on the researches in the area of schema theory and reading comprehension, the closer the match between the reader’s schema and the text, the more comprehension occurs; in other words, comprehension of any kinds depend on knowledge; that is, relating what we don’t know (i.e., new information) to what we already know, which is not a random collection of facts but a theory of the world (Al-Issa, 2006). Schema-theoretic research also highlights reader problems related to absent or alternate (often culture-specific) schemata, as well as no-activation of

schemata, and even overuse of background knowledge. As Carrell (1984) pointed out, schema theory research has shown the importance of background knowledge within the psycholinguistic model of reading. Carrell, Devine, and Eskey (1988, cited in Stott, 1988) also claim that schema theory has provided numerous benefits to ESL teaching and, indeed, most current ESL textbooks attempt schema activation through pre-reading activities. In the same line, Bransford (1986, cited in Al-Issa, 2006) found that problems in reading comprehension can be attributed to the reader's not having the required background knowledge or schemata which leads to not being able to fill in the missing gaps.

Reading, following Flavell (1979, cited in Ajideh, 2003), whether in L1 or L2 is a cognitive enterprise which occurs, in part, as a result of the interaction among the reader, the text, and the context in which reading takes place. Furthermore, to accomplish the task of comprehending the text successfully, the reader must utilize metacognitive knowledge and invoke conscious and deliberate strategies. The reader's metacognitive knowledge about reading may be influenced by a number of factors, including previous experience, beliefs, culture-specific instructional practice, and in the case of non-native readers, proficiency in L2; and it may be triggered, consciously or unconsciously, when the reader encounters a specific reading task.

The reader's metacognitive knowledge about reading includes an awareness of a variety of strategies. In this view, it is the combination of conscious awareness and of the strategic reading process and the active utilization of reading strategies that distinguishes the skilled from unskilled readers. As Chastain (1988) points out, skilled readers are those who are able to recreate the author's meaning perfectly, they often engage in deliberate activities that require plentiful thinking, flexible strategies, and periodic self monitoring ... [while] unskilled readers often seen oblivious of these strategies and often they need to use them.

Metacognitive awareness of reading strategies – broadly defined as the deliberate, conscious procedures used by reader to enhance text comprehension – indicates the need to increase our understanding of the readers' metacognitive knowledge about reading strategies to develop them into active, constructively responsive readers. This work has been very important in prompting reading researchers to examine reader's awareness of reading process, monitoring of reading comprehension, and use of strategies before, during, and after reading.

As Carrell and Floyd (1987) have stated, ESL/EFL teachers must provide the students with appropriate schemata they are lacking, and must also teach students how to build bridges between a student's existing knowledge and new knowledge needed for text comprehension. A number of organized pre-reading approaches and methods have been proposed in the literature for facilitating reading through activation of background knowledge.

The present study would attempt to explore the nature and exact characterization of such pre-reading tasks and to investigate which one can be more effective in activating the reader's background knowledge and enhancing their comprehension.

1.2 Statement of the Problem

For many people, reading is the most important of the four skills in a second language, especially in English as a second or foreign language. For a long time, EFL reading was viewed as a rather passive, bottom-up process. It means EFL reading was primarily a decoding process of reconstructing the author's intended meaning through identifying the printed letters and words and building up a meaning for a text from the smallest textual units at the "bottom" (letters and words) to larger and larger units at the "top" (phrases, clauses and intersentential linkages).

Correspondingly, problems of second language reading and reading comprehension were considered essentially decoding problems, deriving meaning from print (Zhang, 2008).

Only since 1979, has a truly top-down approach been proposed in second language reading (Carrell, 1982; Carrell & Eisterhold, 1983). The top-down perspective of reading process has had a profound impact on reading comprehension, and it views the top-down perspective of the reading process as a substitute for the bottom-up, decoding view of the reading process, rather than being its complement. Only after the appearance of the schema theory, has it been made clear that effective and efficient reading – either in a first or second language requires – both top-down and bottom-up strategies operating interactively (Rumelhart, 1977, 1980; van Dijk & Kintsch, 1983). Even today many students feel that they have to know all the words in a text in order to understand it. They spend long hours laboring over sentence-by-sentence translation, and attribute their difficulties to a lack of English proficiency.

According to schema theory, the process of interpretations is guided by the principle that every input is mapped against some existing schema and that all aspects of that schema must be compatible with the input information. This principle results in two basic modes of information processing, called bottom-up and top-down processing. The bottom-up processing is evoked by the incoming data; the features of the data enter the system through the best fitting, from most general at the top to most specific at the bottom. As these bottom-level schemata converge into higher level, more general schemata, these too become activated.

Bottom-up processing is, therefore, called *data-driven*. Top-down processing, on the other hand, occurs as the system makes general predictions based on higher level, general schemata and then searches the input for information to fit into these partially satisfied, higher order schemata. Top-down processing is, therefore, called *conceptually-driven* (Carrell & Eisterhold,