Pre-reading Activities and Reading Comprehension

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Article history:
Received 14 June 2014
Received in revised form 5 September 2014
Accepted 6 September 2014
Available online 8 September 2014

Keywords:
Reading comprehension, Background knowledge, Schemata, Pre-reading activities.

ABSTRACT

Reading comprehension is of vital importance in learning/teaching ESL. According to National Reading Panel [12], reading comprehension has come to be viewed as the essence of reading. Anderson and Pearson 1984 cited in Paris, Wasik, and Turner, [13] hold that the fund of knowledge a reader already possesses is a critical determiner of comprehension. Studies conducted on pre-reading activities for native speakers have demonstrated the facilitative effects of activating reader’s prior knowledge which is relevant to understanding of the new text Mayer, [10]. This study is conducted to investigate the effects of using two different kinds of pre-reading activities on ESL students’ reading comprehension. In this study, the researchers attempt to find justifiable answer to the following question: Is there any significant difference between achievement scores obtained by the experimental group and those obtained by the control group on reading comprehension tests when pre-reading activities are applied? To carry out this study, 60 second grade high school students, of approximately equal level of proficiency, based on Nelson Test, were chosen from among 100 students from 4 classes. Thirty students were randomly assigned as control group and another thirty as experimental group. The experimental group was instructed and tested through employing the pre-teaching vocabulary and pre-questioning as two pre-reading strategies, and the control group was taught in the normal way without any pre-reading activities. The collected data from achievement tests were analyzed statistically to find the differences between two groups. Independent sample test was run using the statistical package for social science (SPSS 18.0). The results of the data analysis indicated that experimental group did significantly better than control group on tests (p=0.77).

INTRODUCTION

Reading is an interactive activity in which readers are actively connecting the new information they are reading with their prior experiences and knowledge Black, 1998[4]. The purpose of reading is comprehension, or to get meaning from written text. Without comprehension, reading is a frustrating, pointless exercise. For many years, in the field of reading instruction, the concept of reading was considered as the application of a set of isolated skills such as identifying words, finding main ideas, identifying cause and effect relationships, comparing and contrasting, and sequencing. Consequently, comprehension was viewed as the mastery of these skills. Such instruction did little to help students improve their reading comprehension. Therefore, a number of cognitive scientists focused their attention on how readers construct meaning as they read.

According to Pressley and Afflerbach [16], “good reading” is made up of a set of highly complex, well-developed, and well-practiced skills and abilities. What is particularly impressive is the way in which good readers actively and consciously coordinate these skills and strategies before, during, and after reading a text.

So, it can be concluded that before reading, good readers tend to set goals for their reading. They note the structure or organization of the text, and often create a mental overview or outline of the text to help them decide whether it is relevant to their goals.

Paris, Wasik., & Turner [13] believe that during reading, good readers read words accurately and quickly, and simultaneously deal with the meanings of those words—as well as the meanings of the phrases and sentences into which the words are grouped. Good readers connect the meaning of one sentence to the meaning of another. If something is confusing to them, they use their background knowledge to try to clarify the
meanings of words and phrases. Sometimes good readers interact with the text by asking themselves questions about its content and reflecting on its ideas. They are adept at using their background knowledge to make predictions about what might happen next and to understand ideas as they encounter them. Good readers continually evaluate their predictions and revise them as needed.

Poor and slow readers lack sufficient background knowledge about the topic of a text. They may have trouble connecting the ideas of a text. They often are not familiar with the vocabulary they encounter and have trouble determining word meanings. Further, even when poor readers possess relevant background knowledge, they frequently are not able to activate it to help them understand what they read.

Schema theory by Piaget (2001[14]) provides strong evidence for the effectiveness of pre-reading activities that equip the readers with an outline for reading the text.

In addition to preparing native speakers for the concepts that follow, pre-reading activities make the reading task easier and more enjoyable and connect the new concept more meaningfully to prior knowledge (Hansen, 1981[8]).

Individuals acquire schemata through their experiences. As individuals have more experiences, they refine, reshape, correct, and restructure their schemata. One of the major problems involved in comprehension is that all people hardly ever share the same schemata; one of the problems in reading comprehension is that readers do not always have the same schemata as do the writers.

Schema theory is about how we structure knowledge and represent it in memory. Anderson (1984 cited in Alvermann et al., 2013[2]) refers to some functions of schema as providing scaffolding as we process text, allowing effective memory searches while reading, and facilitating inference making.

Good readers often make inferences. They may draw on their background knowledge or look for clues in the text to supply information about characters or events that the author has not provided directly.

Comprehension is the ability of the reader to get meaning from text. “Getting meaning” is a two level process: On the first level, readers identify individual words and their meaning to arrive at understanding what the author has written and on the second level, readers interpret the entire grouping of words they have just read, considering the relationship between these words to any relevant prior knowledge they may possess (Black, 1998[4]). Schema theory believes that the process of comprehension is an interaction between reader’s existing schema and the printed information on the page. The reader encounters information in a text that relates to the schema category. Once activated, this schema triggers connection to other schemata, and thus leads to the comprehension of what is being read.

According to Chastain (1988[5]), pre-reading activities motivate readers to read the texts. When the readers are motivated and prepared for the reading activity, they complete activity better and with less effort; they are eager to participate in the activity since they have established confidence.

Pre-reading instruction helps ESL students know what to expect from the reading.

In order to understand the ways fluent readers employ to comprehend a text, one way is to study the components of the process involved in reading. Grabe (1997[7]) is of the opinion that the reading process possesses some central components, including word recognition, inference making, orthographic processing, phonological coding, working memory activation, sentence parsing, propositional text-model formation, text model development, and the development of an appropriate situation model.

The components of the reading process are discussed at two levels by Baker and Brown (1984[3]):

1. Lower-level processing: In all current models of reading, lower-level recognition processes play an important role. This processing is, in practice, discussed in terms of three sub-component processes: the recognition of the orthographic structure (recognizing letter shapes, letter group patterns, line forms), the recognition of morpheme structure, and the processing of phonetic information. The phonemic coding of the visual input seems to be the most important sub-component because it plays a crucial role in word recognition and keeping information in working memory. It is necessary to note that the above mentioned sub-components all function together as part of word recognition or lexical access.

2. Higher-level processing: In spite of the fact that many scholars do not agree unanimously on the processes that might be involved in higher level processing (Pollatsek & Rayner, 1999[15], Van Dijik & Kintsch, 1983[19]), most researchers now concur that readers generate some form of text-comprehension network that closely reflects the textual information. Additionally, most researchers are of the opinion that some kind of inference making is necessary while reading. In other words, syntactic and discourse signaling in text is applied to strengthen the text network.

The cognitive constructivist view, a contemporary one of reading process, emphasizes that reading is a process in which the reader actively searches for meaning in what he or she reads. And this search for meaning depends on the reader’s prior knowledge or schemata that he or she draws on in that search for meaning and reader actually constructs the meaning she or he arrives at. Three topics describe key components of the cognitive constructivist model: the cognitive orientation, schema, and constructivism.

During the 1970s, a group of psychologists, linguists, and computer scientists focus research on how people think and learn. This new research, called cognitive science, was to produce an applied science of learning.
According to this new concept, reading is a complex, active process of constructing meaning, not skill application. (Dole, Duffy, & Pearson, 1991[6]). The act of constructing meaning is:

1. Interactive, 2. Strategic, and 3. Adaptable.

Models of reading:

Bottom-Up model: Readers go through mechanical patterns by creating piece-by-piece mental translation process (readers recognize letters at first, then recognize the words, at the end readers get the meaning by combining the words they recognized earlier) of the information in the text.

Top-down model: In this view, reader begins with the highest level unit of possible meaning in his/her mind, and then deals with lower level units.

Psycholinguistic Model:

According to this model, readers reconstruct the text according to the graphic cues they have sampled, and to do so they get help from their knowledge of the language and its rudimentary rules.

Skill-Centered Model:

According to the proponents of this model, reading is an unnatural act, which should be built skill by skill; Wallace (1992[18]) maintains that L2 readers have to attend more to bottom-up processes (decoding processes) than L1 readers.

According to her, one of the aims of L2 reading is to make the reader less reliant on top-down processing and help them progress towards greater reliance on bottom-up strategies while becoming proficient readers.

Over twenty years ago, most of the scholars had some sort of unidirectional interpretation in relation to the type of processing. In other words, some of them considered top-down processing more effective whereas some others gave more weight to bottom-up processing. However, today scholars have ceased debating whether reading is a bottom-up language-based process or a top-down, knowledge-based one. As Black (1998[4]) has vividly stated:

Most people now accept that the two processes interact. Furthermore, we believe that readers actively control this hidden process, and that this control directly affects their ability to understand and to learn from text. This control, commonly called meta-cognition, involves thinking about what one is doing while reading.(p. 320)

Although most scholars have accepted that the two processes (top-down and bottom-up) interact, one extremely critical point must be emphasized regarding non-native students in particular. Since English is not the mother tongue of these students, it is crystal clear that the degree of their mastery over this language is considerably less than that of native speakers. To put it in other words, they enjoy restricted linguistic ability, and on the basis of this fact, they have to attend more to bottom-up process (Wallace, 1992[18]). In this respect, Horiba (1990[9]) also cites a number of studies on the processes of L2 reading comprehension, which conclude that a reader’s limited command of the language increases his/her reliance on graphic information, and inhibits the use of effective reading strategies (p. 189). Scrutinizing these two processes, Chastain (1988[5]) clarifies this, stating, “In a bottom-up approach the emphasis is on the language found in the reading as the basis for comprehension. In the other one, importance is attached to what readers know about reading and the world in general” (p. 36).

Reading activity:

- Pre-reading activity: this activity motivates the readers and gives confidence to them to do activities better and completely.
- While-reading activity: it discusses skimming and scanning activities that enable readers to predict the purpose of the passage, and get the writer's message.
- Post-reading activity: readers interpret and summarize the text and illustrate the relationship between questions to make conclusion about text.

Pre-reading activities

- General view on pre reading activities: Pre-reading activities are enabling activities because they provide a reader with necessary background to organize activity and to comprehend the materials.
- Pre-reading instruction: By making the reading task easier and connecting the new content meaningfully to prior knowledge, pre reading activities make reading enjoyable task (Taglieber, 1988[17]).
- Pre-viewing: It helps reader predict or make guesses what is in the text.
- Pre- questioning: this activity refers to having students generate their own questions on the topic of the reading passage (Taglieber, 1988[17]).
- Brainstorming: Students are given key words and then invited to call out words and concepts provided by the teacher.
Semantic mapping: It is an organized arrangement of vocabulary concept which reveals what students know about topic and helps them construct the new information learned from text.

Strategies for activating background knowledge
- Reflecting and recording: This helps students activate background knowledge through promoting them to bring to mind, state, write down, or record what they know.
- Interactive discussion: Students record their prior knowledge on a topic and then are engaged in a group discussion of the topic; also, teacher encourages them to use this knowledge.
- Answering question: Teacher can facilitate students’ activation of background knowledge by having them answer questions before and/or while they read new materials and answering questions leading to reading comprehension.
- Contact: It assists students in searching for preconceptions, comparing and contrasting these preconceptions with new information and evaluating new conceptions.

The useful comprehension strategies:
- Activating and using background knowledge: This strategy activates readers’ background knowledge and helps them understand what they read. Background knowledge is made up of person’s experience.
- Generating and asking question: This strategy involves readers asking question about text, helps them to integrate information, identify main ideas, and summarize information.
- Making inferences: This strategy helps the readers evaluate or draw conclusions from information in text.
- Predicting: This strategy helps the readers get meaning by making informed prediction from a text.
- Summarizing: This strategy helps the readers pull together information in a text to explain in their own word.
- Visualizing: This strategy helps the readers make mental image of text to understand the events they encounter during the text.
- Comprehension monitoring: This strategy helps the readers think about their comprehension processes as they read the text.
- Using graphic and semantic organization: This strategy allows the readers to present graphically, write or draw, and to organize the meanings and relationship of the ideas in the text.

Statement of the problem:
Background knowledge is of primary importance for ESL readers (Black, 1998[4]); so, schema based pre-reading activities should be used for activating and constructing such background knowledge. Although a lot of researches have been conducted on reading mechanism since 1970s, the dominant style in Iranian high school English reading classes is based on Grammar Translation method; that is, the majority of the students stick to bottom up strategies, and the priority of the class is to translate each sentences.

In other words, the significance of the interaction between students and texts is belittled by the majority of the students.
Therefore, teacher can present some activities to change bottom up reading style to more interactive and top down way of reading.

Significance of the study:
In interactive model proposed by Aebersold, et al. (1997[1]) reading is viewed as a kind of interaction between reader and text and reader’s background knowledge has a significant role in reading comprehension. Comprehension failures may occur in pre-reading, while reading, and post-reading stage. The first stage is the focus of the present study.

The present study emphasizes the significance of pre-reading activities in the readers’ background knowledge activation; pre-reading activities provide students with a particular purpose for reading, help them predict the content of the text, facilitate comprehension, and motivate students to read more.

Research question and hypothesis: This study attempts to find reasonable answer to the following question:
Is there any statistically significant difference between the achievement scores obtained by the experimental group and those obtained by the control group on reading comprehension texts when pre-reading activities are applied?
Based on the above research question, the following null hypothesis is formulated:
There is no significant difference between the mean scores obtained by the experimental group and those obtained by the control group on reading comprehension tests when pre-reading activities are applied.

Methodology:
Participants: This study was conducted in Esmat High School, Zanjan. To carry out this study, 60 second grade high school students, of approximately equal level of proficiency, based on Nelso test, were chosen from
among 100 students from 4 classes. Thirty students were randomly assigned as control group and another thirty as experimental group. The participants' age ranged from 16 to 18. The experimental group received pre-vocabulary and pre-questioning activities, but control group did not receive any specific treatment.

Materials: The researcher selected three passages titled “The world Cup Games”, “Every Word was a Puzzle”, and “What is Internet” (taken from their course book written by Birjandi and Norouzi [20]). For every passage, a test including 25-35 Multiple-choice questions with calculated validity and reliability was designed.

Nelson (2000) test was given as a pre and Language Proficiency test to select homogenized groups. After the instruction of the passages, teacher made test was administered to check their achievement and improvement.

Procedures: For control group all 3 passages were taught without providing any pre-reading activities, but experimental group received pre-vocabulary and pre-questioning activities. After, the two groups answered multiple choice questions in 40 minutes for 10 sessions.

Data Analysis: Analysis of the results indicated that pre-reading activities can help ESL high school students to develop their reading.

RESULT AND DISCUSSION

Table 1: Results for Pretest.

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<th>two-tail</th>
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Table 2: Results for post achievement tests.

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<td>T= 2.11</td>
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Discussion:

The concept of background knowledge, schemata, or patterns stored in the mind, has attracted the attention of research in narrative comprehension, LI reading, and, more recently, L2 reading comprehension. Today the claim that background knowledge is an essential determiner of reading comprehension is relatively well developed and generally agreed upon in the literature on LI reading comprehension (Anderson, Spiro, and Anderson, 1978; Adams and Collins, 1979; Bransford, 1979; Adams and Bruce, 1982 cited in Meurer, 1985[11]).

This study shows that pre-reading activities, applied to the experimental group, in the pre-reading stage contribute to the comprehension of reading passage.

The findings indicate significant difference between experimental group and control group on their reading comprehension. The means of E.G on reading comprehension achievement tests are higher than those of C.G. The differences are significant (T=2.11).

The null hypothesis is rejected because there is statistically significant difference between E.G and C.G (P = 0.77).

So, pre-reading activity motivates students to read more and helps them identify the purpose for reading the materials. When students are motivated to read, they can find the purpose for reading the materials.

Conclusion:

The research carried out revealed the impact of pre-reading activity on reading comprehension. The findings indicated that there is a significant difference between the mean scores of E.G and C.G on reading comprehension achievement tests.

Most of Iranian students do not know how to read meaningfully. They do not interact with text they read. They are not familiar with strategies which may help them in reading since they do not get any instruction concerning these.

It can be concluded that it is useful to administrate reading activities in reading classes which employ schema activation to make the text more comprehensible for reader.
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