

THE EFFECTS OF COGNITIVE AND METACOGNITIVE STRATEGY TRAINING ON THE READING PERFORMANCE OF TURKISH STUDENTS

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A quick review of foreign language education in Turkey indicates that many of today's students develop a bottom-up view of reading, interacting passively with texts, such as rereading, and memorizing information word for word. In fact, developing effective reading skills has become an evitable goal in the second language learning or foreign language curriculum. As it is argued in many contemporary studies, the main reason people around the world study English as a second or foreign language is to read. Therefore, the purpose of teaching reading to students is to improve the attitudes, abilities, and skills needed for obtaining information, developing interest, using appropriate strategies, and understanding the written material by reading through comprehension. Among various reading models, the interactive model of reading in EFL is the most contemporary one which comprises the above mentioned issues. Various learning strategies, such as advance organizers, metacognitive strategies and cognitive strategies, have been developed and widely preferred in the EFL setting to make the students self confident, active, and efficient readers. As is indicated, Turkish EFL readers interact passively with texts. Considering this point of view, the purpose of this research study is to examine the influence of metacognitive and cognitive strategies for the purpose of learning to read in English as a Foreign Language. Pursuing these views in this study using metacognitive and cognitive strategies, Semantic Mapping, Schema Mapping, and SQ4R are employed to enhance the reading achievement of the students' English Language and Literature department. The method which is used in this study for measuring outcome results, pretest-posttest control group experimental research design is chosen. Since the results demonstrate the strong positive effects of Semantic Mapping, Schema Mapping, and SQ4R this leads the researcher to propose them as very helpful instructional techniques to be employed in order to enhance EFL students' reading comprehension.

Keywords: Learning Strategies, SQ4R, Schema Mapping

Developing effective reading skills has become an evitable goal in the second language learning or in foreign language learning curriculum. As it is

argued in many contemporary studies, the main reason people around the world study English as a second or foreign language is to read. Texts enter our ordinary daily life in many different ways; we read magazines, we read bills, we read aloud fairy tales to our children. It will not be an exaggeration to say that we live in a textual world.

Despite the important role the act of reading plays in our life, it was only recently that the complex of mental activities underlying the reading processes have come to receive due attention.

Throughout 1980's, reading is seen as the acquisition of meaning through the interaction of the writer's intended meaning and the reader's background knowledge. For that reason, the interactive model of reading and the role of schema theory play crucial role in the reading process. Schema theory is essentially a theory about knowledge, how it is represented, and how it is used by humans. That is, schemata can also be used to describe our knowledge about how to act in certain situations. A schemata, then, is a particular class of concepts stored in memory.

Important elements within a schema are called slots, nodes, or variables. They are arranged hierarchically from the most general to the most specific information. When the schema gets activated, and it is used to interpret some event, the slots are instantiated with particular information. As a result, reading comprehension under interactive model is achieved through an interaction among the following multiple knowledge sources.

- The text.
- The reader's foreign language proficiency.
- Having appropriate content and formal schemata.
- Acquiring learning strategies.

Learning strategies are the actions and ideas for the purpose of understanding and remembering new information. Some learning strategies, such as taking notes, drawing diagrams to understand or to remember, repeating key words, and formulating questions are observable strategies. On the other hand, some learning strategies cannot be observed because they are mental process. Pursuing these views in this study as metacognitive and cognitive strategies, Semantic Mapping, Schema Mapping, and SQ4R are employed to enhance the reading achievement of the students.

Semantic Mapping

Johnson and Pearson (1984) argue that 'as an instructional technique in reading, semantic mapping is one of the successful technique which embraces a variety of strategies designed to display graphically information within categories related to central concepts'. As a pre-reading activity, students and the teachers discuss the meaning of the title and the students are asked to predict ideas that might be covered in the text. The teacher facilitates the students' discussion to organize the associations into form of a categorized map. This procedure activates the students' prior knowledge and also introduces key vocabulary from the text.

Schema Mapping

Applegate et al. (1994:34) emphasize that 'schema map as a variation of graphic organizers is characterized by the construction of a diagram which depicts the relationship among key concepts in the texts'' in this strategy, the students survey the text to identify the major themes, the supporting ideas, and their logical relationships. The students paraphrase major themes into brief phrases and construct a categorized premap. Later, the students and the teacher discuss the relationship between the categorized schema and the text. Discussion at this time focuses upon students' awareness of the relationships between and among the ideas, and this discussion, which is activating their prior knowledge, helps the students to focus on relevant schema. After reading the entire passage, the students are responsible to construct a postmap retelling the essence of what they have read. It is a kind of visual display of the relationships between and among ideas. In general, mapping is distinguished from simple outlining of text by means of a visual display of the relationships between and among the ideas. In this way, the students can write a brief summary of the text by using the postmap that displays the ideas and their connections.

SQ4R

SQ4R (Pauk, 1984) or originally SQ3R (Robinson, 1941) is a student directed study approach which is more text focused than reader focused. The basic steps include Surveying text, formulating Questions based on the survey step, Reading, Recording, Reciting, and Reflecting.

Rather than activate prior knowledge, SQ4R may actually create knowledge in the reader during the survey step prior to reading. Self questioning and predicting occur during the Survey and Question stages. Furthermore, it is quite clear that self questioning during reading is a very useful technique which facilitates learning. Students thus can improve his/her comprehension.

After surveying and self questioning phases, students read the text to see whether their predictions are accurate. In the recording phase, the students take notes and highlight key terms in text. In the reciting phase, they look at their notes to fill in gaps in their understanding. In the last phase, the students write a brief summary in order to reflect of what they understand from the text.

When we look at the language education in Turkey will indicate that, many of the students develop a bottom-up view of reading, interacting passively with text, such as rereading and memorizing information word for word. To put it differently, bottom-up view of reading comprehension is favoured rather than top-down view of reading. Furthermore, strategy training in the teaching of basic skills is not considered to be significant in Turkey.

Considering this point of view, the purpose of this study is to examine the influence of metacognitive and cognitive strategies on the process of learning to read in English as a foreign language.

Thus, we hypothesized that subjects trained in metacognitive skills like, semantic mapping, schema mapping, and SQ4R will perform significantly better on a reading comprehension test than subjects in the control group. Conducted at Mersin University, the present study adapted a pretest-posttest control group design. The subjects are all at low advanced level of proficiency; the preparatory class students of English Language and

Literature department make up the experimental group, and the preparatory class students of school of Tourism and Hotel Management form the control group.

Before training procedure two types of tests are prepared to achieve variety in the number of texts and questions types. The tests are organized for the piloting and it is submitted to first and second year of Tourism and Hotel Management and English Language and Literature department. After receiving the scores of the piloting, the reliability of each section of the comprehension test is analyzed through SPSS. Depending on the reliability value, the final form of reading comprehension test is developed.

The total training period is twenty-eight weeks, four hours each week. The control group has the same amount of time in their reading classes, and they deal with different materials.

In this study, it is assumed that the students in the experimental group do not know how to use the basic reading skills. They should be aware of the basic reading skills in order to understand the reading strategies that will be taught in the second semester. To reach this end, in the first semester, we prefer to use made-up, authentic, and non prose texts in order to teach basic reading skills to the experimental group. For example, skimming, scanning, guessing the meaning of the unknown words, differencing, etc.

In the second semester, there are four steps to enrich the metacognitive and cognitive strategy uses in reading comprehension process:

- ✓ teaching semantic mapping,
- ✓ teaching schema mapping,
- ✓ teaching SQ4R,
- ✓ combining these three strategies.

When the students are ready to combine semantic mapping, schema mapping, and SQ4R, we model for students how to combine these three strategies. Students begin with *semantic mapping* to construct a pre-map in order to activate their schemata about the title of the passage. After completing the pre-map, they *survey* the text to identify major themes, supporting ideas, and concepts that underline the material. Students discuss key concepts in light of predictions, and they paraphrase major themes to construct a schema map. Students monitor their own understanding of concepts and correctness of predictions. They have a general idea of what a reading passage is about, and they ask themselves *questions* based on their survey. Then they *read* the passage taking notes of information directly related to their questions. In this way, they *record* the answers. In the *reciting* phase, they look at their notes to fill in slots in their understanding. If students do not find out all the answers of their questions, they will quickly go over the text to fill the gaps. Since they fill the gaps, now they are ready to construct a post-map by retelling what they have read. In the *reflect* phase, they write a brief summary using the macrostructures shown on the post-schema map. When we examine of the students' summary, we see that they use the post-schema map to write a summary which includes the text macrostructures and major related information.

Analysis of the data

In order to find out whether the means of the experimental and the control groups truly differed on the pre and post reading comprehension tests, a t-test for independent samples is used as the measurement procedure in this study.

The result indicates that the experimental group and the control group are equal before the treatment, as it is seen in table 1 ($t= 0.63$; $df: 28$)

Table 1. Overall Pretest Scores of Experimental and Control Groups

	N	X	S	t
Experimental Group	15	8.93	1.944	0.63
Control Group	15	8.93	3.109	

When we analyze the overall posttest results of both groups, there is a statistical mean difference between the experimental and control groups. The findings indicate that the experimental group have significantly higher mean differences than the control group on the posttest as it is shown in table 2 ($t=21.56$; $\alpha=.001$; $df:28$)

Table 2. Overall Posttest Scores of Experimental and Control Groups

	N	X	S	t
Experimental Group	15	19.4	1.805	21.56*
Control Group	15	7.93	3.081	

* $p<.001$

Conclusion

The results show the strong positive effect of the strategies which lead us to suggest semantic mapping, schema mapping, and SQ4R as a very helpful instructional techniques to be employed in order to enhance EFL learner's reading comprehension. Besides this, the use of these strategies appear to increase the motivation of students since their reaction to the training is positive. In this way, the students easily adapt the strategies during the training period. As it is seen in the positive results of the reading comprehension test, reading becomes easier to them, and also students are eager to participate in each strategy. At the same time, the process of these strategies allows the teacher to judge and interpret what students demonstrate is what they have already known about a topic during the mapping and summarizing phases. Therefore, further research is necessary with larger sample of the Turkish EFL population in order to maximize external validity of this study.

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