Research Paper | **Technology**

Experimental Study on Visualizing Strategy to Improve Reading Comprehension

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ABSTRACT | *Reading is a complex task it includes all cognitive process. Comprehension involves higher order thinking skills. The purpose of this article is to investigate the effects of metacognitive reading strategies using visualization strategies. The main objective is to train the students to use visualizing strategy in order to improve their thinking. Therefore, the research shows how students can benefit from metacognitive strategy like visualizing strategy.*

KEYWORDS : reading, metacognition, visualizing and strategy

Introduction:

Reading is an active process where the readers utilize their cognitive and mental capacities to figure out the internal meaning of the text. It is important to know that how students plan for a given task and how they monitor, check and evaluate their outcomes using different strategies therefore the researcher is going to focus on visualizing strategies. According to Anderson and Pearson (1984) state the reader comprehends a text by actively constructing meaning internally from interacting with the materials that are read. Therefore comprehension involves a kind of thinking process. Hence the researcher has investigated the effects of metacognitive reading strategies namely visualization strategies

Review of related literature:

Cain and Oakhill (2006) examined profiles of children with specific reading comprehension difficulties. The study aimed to identify similar weakness among the children that could be associated with poor text comprehension and could lead to slow reading development. The study suggested that there is no single underlying factor attributing to poor comprehension. No evidence was presented outlining any fundamental skills weakness in the poor comprehension. However, results did suggest that poor comprehenders with weak vocabulary and poor cognitive ability were susceptible to impaired growth in word reading and reading comprehension.

Van Dijk and Kintsch (1983) identified many types of strategies used for different cognitive tasks. These strategies include language strategies, grammatical strategies, discourse strategies, cultural strategies, social strategies, interactional strategies, pragmatic strategies, semantic strategies, schema strategies, schematic strategies, and rhetorical and stylistic strategies. They further delineated specific strategies involved in comprehension, including socio- cultural strategies, communicative strategies, general reading strategies, local comprehension strategies, local coherence strategies and knowledge use strategies.

Aim of the study:

Students have studied English from their kinder garden or primary schools but their comprehension is low. This may be due to the fact that they do not have opportunities to apply the strategies on a read the passage. Students are taught in traditional way that teachers ask students to find answers to the questions given below the comprehension passage rather they are not focused on each sentence. This research work is deliberated to investigate the effects of metacognitive reading strategies using visualization strategies.

Objective of the study:

The main objective of the research is to develop deeper understanding of the text to the students using visualizing strategies and to evaluate the effectiveness of reading comprehension in fostering metacognitive strategies

Hypothesis of the study:

There is no significant difference between the mean scores of visualizing strategy in connection to reading comprehension with respect to gender

There is no significant difference between the mean scores of visualizing strategy in connection to reading comprehension with respect to locality of residence and type of school

Tools for investigation:

At the beginning of the study a questionnaire was administrated to a group of ninety students enrolled in higher secondary school, So as to collect data with regard to the use of reading comprehension strategies. Then a pre test and post test experiment was carried out. The participants were given pre test, they received metacognitive training in visualization, and finally they take the post test. The result of the two tests were compared and discussed. The findings were statistically analysed through SPSS.

Visualization

The goal of creating images while reading is to create emotional connections between new material and a person who reads it. Readers create images to form unique interpretation, clarification and draw conclusion to enhance understanding. The readers create mental images as they read to deepen the meaning of the text. Evoking mental images helps readers create images in writing. Proficient readers create metal images during and after reading. These images come from all the senses and the emotions are anchored in readers' prior knowledge. Visualizing is like creating a movie in readers mind while they read, try to see, hear, feel and even smell while reading. Creating images help to understand and remember what they read.

• Stages in visualization:
• Before Reading: Connecting to Prior Sensory Knowledge
• During Reading: Activating Sensory Images
• After Reading: Reflection

Visualization is part of the background knowledge that readers bring to a text. It helps students utilize all their senses as they read and supports their comprehension. Sensory images also have the potential to increase readers' enjoyment and memory in reading their academic text. It also help students store reading events in their memories.

Passage:

Objective: To train the students to use visualizing strategy in order to improve their thinking

Strategy used: visualizing

Skill aimed: reading

Materials used: reading passage on "Titanic Post card helps save a life"

Duration: one hour

Procedure:

• The students were asked to fill the column, based on KWL Chart
With a partner, describe the pictures that you each created in your mind's eye from the text provided.
• What did you like about your own and your partner's mind pictures?
• Read the passage again for ideas or feelings which add details to your own mind pictures.
• Circle the words in the text that best help you to form great mind pictures about the text?

- What ideas of your own did you add which make the picture vivid or more interesting but which were not in the text itself?
- Discuss your mind pictures again with your partner?
- What new details or ideas appear in your mind pictures as a result of the second reading?
- How are you and your partner's mind pictures similar and different?
- How do you explain the similarities and differences in your mind pictures?
- Create a caption which includes words from the text that inspired your mind picture.

Passage:
TITANIC POSTCARD HELPS SAVE A LIFE
Baltimore, Maryland – an old postcard changed the lives of an eleven year old boy and very sick women. The postcard had a picture of a steamship titanic. The titanic was the biggest ocean liner in the world. It hit an iceberg and sank on April 14, 1912. More than 1500 of the 2200 people on the ship were killed.

The postcard was passed from one person to another for more than 80 years. Then it showed at a card show for people who like to collect postcards. An eleven year old boy, John Russell, came to the show with his grandfather. His grandfather knew everything about the titanic and its trip from England to New York. "Let's buy that postcard", he told Joey. It will be important someday". Two years later, Joey's grandfather took him a special trip. They went on a cruise ship to the North Atlantic Ocean to watch as workers raised the titanic up from the bottom of the ocean. Joey put his special postcard in his special postcard in his bag for the trip. On the ship, Joey met Edith Haismen. This woman was on the titanic when it sank. She was one of the people who were rescued. Joey pulled the postcard out of his pocket. "Please sign this Mrs.Haismen," he said. She was happy to write her name on the back of the postcard.

When Joey got home, he put the postcard away and forgot about it. Then Kate Shelley, one of Joey's friends, told him that her mother, Mary was very sick. She had Leukemia, which is a very serious blood disease. She needed a operation, but there was a problem. The operation was very expensive, and the family needed $80,000 to pay for it. Friends and relatives tried to help. But where could they get so much money?'

Then when Joey went to see the new movie "Titanic", he had an idea, "Millions of people are seeing and reading about the Titanic," Joey thought. He remembered the old postcard with Edith Haismen's signature on it. "Maybe I can sell it for some money. Then I can help Kate's mom."

Joey told his mother and father about his idea to help Mrs. Shelley. His parents helped him try to sell the postcard to the person who would pay the most money for it. Joey's story was on television and in newspaper. Joey and Kate even went to New York to be in national TV show. After the show, many people called in to offer money for Titanic card. Someone bought it for $60,000. Joey's big heart and the old Titanic postcard worked together to save a women's life.

Experimental phase:

Sl.no	Experimental phase	Activity	Concept	duration
1	Phase	Manipulating through visualizing for the experimental group on how to use the strategy while reading a passage	Visualizing	One month

Analysis:
Null Hypothesis (H$_0$):
There is no significance difference between the Metacognitive strategies of Gender with respect to visualizing.

Alternative Hypothesis (H$_1$):
There is a significance difference between the Metacognitive strategies of Gender with respect to visualizing.

Test statistic:
Chi square test is performed for both the variable

Table 1: visualizing and Gender chi square test

Visualizing	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.178	1	.673

Interpretation:
From the above table 6.63, it is observed that Pearson chi square value is 0.178 with df = 1, where $p > 0.05$ is significant at 1 degree of freedom showing the assumption of the chi square is significant at 0.673. Therefore it is inferred that the chi square value is greater than 0.05. So, null hypothesis is accepted and said that there is no significant difference between the Metacognitive strategies of Gender with respect to making connection. It is concluded that there is an association between male and female students with respect to visualizing strategy.

Null Hypothesis (H$_0$):
There is no significance difference between the Metacognitive strategies of Locality and type of schools with respect to visualizing.

Alternative Hypothesis (H$_1$):
There is a significance difference between the Metacognitive strategies of locality and type of schools with respect to visualizing.

Test statistic:
Chi square test is performed for both the variable

Table 2: visualizing and (Locality & type of schools):

Visualizing	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.05	2	0.218

Interpretation:
From the above table 6.71, it is observed that Pearson chi square value is 3.05 with df = 2, where $p > 0.05$ is significant at 2 degree of freedom showing the assumption of the chi square is significant at 0.218. So, null hypothesis is accepted and said that there is no significant difference between the Metacognitive strategies of Gender with respect to making connection. It is concluded that there is an association between locality and type of schools with respect to visualizing strategy.

Result analysis:
The experimental students used visualizing strategy, out of 40 students 16 out performed in average and 16 in high but 6 in low. There is no association between visualizing strategy with respect to gender, locality and type of schools.

Conclusion:
The present study attempts to shed light on the relationship between reading comprehension and metacognitive strategies. This research work is the search for a teaching methodology that best assists learners to become independent in comprehending text. The finding of the study visualizing strategies has enhanced learners' performance in reading comprehension of the students.

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