

Journal of Research in Education

(A Peer Reviewed and Refereed Bi-annual Journal)

(SJIF Impact Factor 5.573)



St. Xavier's College of Education

(Autonomous)

Digha Ghat, Patna, Bihar - 800011

VOL.12, No.1 | JUNE, 2024

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Exploring Metacognitive Reading Strategies Awareness in Aspiring Elementary Teachers

Abstract

Metacognition, defined as "thinking about thinking," is also referred to as knowledge about knowledge. In educational psychology, metacognition is an abstract and complex concept that encompasses the knowledge and control one has over their thought processes and learning activities. Some strategies highlighted by researchers include planning, previewing, predicting, skimming and scanning, remembering difficult words, guessing, re-reading, translating, note-taking, highlighting major information, commenting, summarising, paraphrasing, differentiating main ideas from supporting ideas, visualising, thinking aloud, associating, adjusting the pace of reading, checking understanding of the text, making inferences, and verifying guesses and predictions.

This study aims to assess the metacognitive awareness, perception, and use of reading strategies among prospective elementary teachers when reading their academic texts. It seeks to find the correlation between the dimensions of metacognitive awareness, specifically Global Strategies, Problem-solving Strategies, and Support Strategies. The findings reveal a highly significant correlation between these dimensions of metacognitive awareness in reading strategies.

Keywords: Metacognitive Awareness, Reading Strategies, Global Reading Strategies, Problem-Solving Strategies, Support Reading Strategies

Introduction

Students learn through reading text material or study material that is relevant to their needs and requirements. Learning through cognitive abilities and reading skills suited to their potential helps students sustain knowledge for their benefit and apply it as needed. In this process, a learner demonstrates their potential for managing skills such as time, stress levels, reading strategies, cognitive ability, retention, adaptability, visualization, and inferencing. According to Carrell (1989) and Zhang (2001), reading is an interactive cognitive process where the reader forms hypotheses, tests predictions, and constructs meaning using their knowledge of vocabulary and language. Anderson (2002) referred to a reader's awareness of monitoring, and regulation of reading strategies as metacognitive awareness.

Metacognition: Theory and Concept

Flavell (1971) used the term meta-memory in the context of an individual's ability to manage and monitor the input, storage, search, and retrieval of the contents of his memory. He implied that metacognition is intentional, conscious, foresighted, purposeful, and aimed at achieving a goal or outcome. In his article (1976) the term metacognition was first formally used in the title of his paper. He states that metacognition comprises both monitoring and regulation.

John H. Flavell (1976) coined the concept of Metacognition. He is regarded as its originator, and has done pioneering work on it [Palennari, et. al. (2018), Livingston, 1997)]. Etymologically, meta means "beyond" and cognition means "intellectual process" (such as perception, memory, thinking and language) through which information is obtained, processed, transformed, stored, retrieved, and used (Ashman and Conway, 1997). Metacognition, therefore, means "beyond cognition". Paris and Winograd (1990) decoded meta-cognition as having two vital predominances: self-appraisal and self-management of cognition.

John Flavell also identified three "metas" that children acquire over time about information storage and retrieval. These were: firstly, the child learns to identify situations in which intentional, conscious storage of certain information may be useful at some time in the future; secondly, the child learns to store any information that may be related to active problem-solving, and have it ready to retrieve as per

the need; and thirdly, the child learns making deliberate systematic searches for information that may help solve a problem, even when the need for it is yet unforeseen.

The first attempt to generate a formal model of metacognition was presented by Flavell (1979). He acknowledged the significance of metacognition in a wide range of applications that included reading, oral skills, language acquisition, memory, attention, self-instruction, social interactions, writing, personality development and education.

Metacognitive strategies are in line with set goals and objectives of the students with an understanding of the content or subject matter while connecting the past knowledge with the present or new knowledge and encoding them for the future in their memories (Paris & Jacob, 1984:2083-2093). The students must know the strategies for planning, monitoring and evaluating their reading assignments. In a nutshell, metacognition involves thinking about thinking, self-awareness, management, memory, and learning strategies.

Concept of Metacognitive Reading Strategies

Reading plays a pivotal role in every individual's life and it is an equally important skill that lays meaning to words read. Reading makes a person visualize the printed symbol and reconnect it with the sound or pronunciation it is associated with. It makes one conscious of what one is to deliver. It enlarges the horizon of our experience, knowledge, reflective skills, and critical skills and provides a platform to rest our curious minds. Metacognition encourages a learner to monitor his skills and strategies involved in his understanding of his learning in an organized manner. Metacognitive learners do their work more efficiently and effectively. They are self-regulated learners using the right strategies at the right moment. They identify learning blocks and change strategies to overcome the obstacles to attain the goal. Metacognitive skills differentiate between a lay reader and a skilled reader.

It is a teacher's responsibility to help students inculcate metacognitive skills so that they become skilled learners and active thinkers. Since teachers mould the students and shape their future it becomes essential to know the thought process of the teachers themselves. This requires teachers to introspect their own reading and learning patterns. A study indicated that the participants reported a high use of problem-solving and a moderate use of global and support strategies. Besides, problem-solving strategies positively correlated and predicted literal as well as higher-order comprehension (Ghaith,

2019). When teachers know what reading strategies students use and how frequently in pre-active, active and post-active stages and the reason behind their specific use, the reading strategies may be in tandem with individual differences, individual needs and individual problems.

Metacognition incorporates planning, monitoring and evaluation. It is a step-by-step process.

- **Planning before reading:** Students should be aware of the task at hand, and being aware of their thought process to connect with the topic, is primary towards developing metacognitive awareness.
- **Monitoring the contextual passage:** Students should monitor the task at hand relating connections, execution and performance, inferences, and predictions. They should know whether the content requires to be broken down into smaller passages for better understanding.
- **Evaluation of reflection post reading:** Students should evaluate their reading by the expected goal. They should be able to relate to their previous thought before reading and post-reading. They should be able to connect with the author's perspective thereby reorienting their thinking skills.

When our thought process is conscious, purposeful and goal-oriented we indulge in the regulation of our cognition that is metacognition. In the teaching and learning transaction, it is an essential component today where we are guiding our students towards higher-order thinking sans rote learning. Today teachers have an important role-play in the teaching-learning transaction since they immediately connect to the students and their thought process in the classrooms every day. They make understanding easier through their skills of questioning, reflecting and feedback. They are vital in providing a learning environment conducive to metacognitive thinking thereby applying metacognitive strategies in day-to-day teaching and learning transactions.

The usage of Metacognitive skills projects two aspects of reading. First is cognition about reading and second is text comprehension. The ongoing utilisation and practice of the metacognitive skills distinguishes between a skilled reader and a beginning reader. Paris and Jacobs (1984) differentiated the skilled readers as being conscious of activities that required thinking, flexible strategies, and periodic self-monitoring. They are aware of the topic, look through the passage

forward and backward and also monitor their understanding as they read through. These skills are not utilised by beginning readers or poor readers. The novice readers are unaware of these strategies and they overlook the necessity of their usage. According to Jacobs & Paris (1987), it is “reportable, conscious awareness about the cognitive aspects of thinking”

Review of Related Literature

A review of the different research suggests that higher-level learners had metacognitive awareness of reading strategies at different levels (Khatri, 2021). Cognitive strategies were more frequently used by the learners and on the other hand the supportive strategies were used the least, high use of problem-solving and moderate use of the global and support strategies was also reported. The problem-solving strategies positively correlated with higher-order comprehension (Ghaith & Sanyoura, 2019). Cohen (1990) opines that reading strategies are mental processes consciously chosen by the readers to further utilise in accomplishing the reading tasks at hand. Children who were more aware of the nature of reading tasks also scored higher on tests of reading comprehension and the informed instructions in the classroom could enhance both awareness and comprehension skills (Paris & Jacobs, 1984).

Pinninti (2016) revealed that the frequency and the purpose of reading strategies were influenced by the stage of reading. Children who were more aware of the nature of reading tasks also scored higher on tests of reading comprehension and found a significant, direct, positive correlation between total metacognition and total teacher competency scores (Kapadia & Garg, 2012). This indicated that the metacognition of students was related to teachers' technical competencies such as communication skills, evaluation ability, classroom management, mastery over content and ability to organise information.

The more one reads, the more they become aware of the context they are interacting through thereby becoming aware of their cognitive capacities and developing their potential of metacognitive awareness for reading strategies suitable to their individuality.

The Rationale of the Study

Despite extensive research highlighting the importance of metacognitive strategies in reading, there remains a gap in understanding how prospective elementary teachers engage with these strategies. As future educators, their ability to effectively employ and model metacognitive

reading strategies is crucial for fostering these skills in their students. The transition from theoretical knowledge to practical application is vital, especially in the formative years of education.

Previous studies, such as those by Anderson (2002), Mokhtari and Reichard (2002), and others, have established the foundational role of metacognitive awareness in reading comprehension and academic performance. However, limited research specifically focuses on prospective elementary teachers, a group that plays a pivotal role in early education. Understanding their level of metacognitive awareness and their use of reading strategies can provide valuable insights into teacher education programs and highlight areas for improvement.

Moreover, given the evolving educational landscape and the increasing emphasis on self-regulated learning, it is essential to equip future teachers with the necessary skills to manage their reading strategies effectively. This study aims to fill this gap by assessing the metacognitive awareness of reading strategies among prospective elementary teachers and exploring the relationships between different types of reading strategies. The findings will not only contribute to the existing body of literature but also inform the design of targeted interventions and training programs to enhance the metacognitive skills of future educators.

In summary, this study addresses a critical need to evaluate and enhance the metacognitive awareness of reading strategies among prospective elementary teachers, ensuring they are well-prepared to support their future students in becoming proficient and independent readers.

Research Objectives

- To determine the level of Metacognitive awareness of reading strategies among prospective elementary teachers.
- To find the significant relationship between Global Reading Strategies and Problem-Solving Strategies of Metacognitive Awareness among prospective elementary teachers.
- To find the significant relationship between Global Reading Strategies and Support Reading Strategies of Metacognitive Awareness among prospective elementary teachers.
- To find the significant relationship between Problem-solving and Support Reading strategies of Metacognitive Awareness among prospective elementary teachers..

Null Hypotheses

- There is no significant relationship between global reading strategies and problem-solving strategies within the context of metacognitive awareness among prospective elementary teachers.
- There is no significant relationship between global reading strategies and support reading strategies within the context of metacognitive awareness among prospective elementary teachers.
- There is no significant relationship between problem-solving strategies and support reading strategies within the context of metacognitive awareness among prospective elementary teachers.

Methodology

Method: A descriptive survey method was used in this study.

Research tool: For this study, the translated and adapted version of the Metacognitive Awareness of Reading Strategies Inventory (MARSI) Version 1.0 (2002) by Kouider Mokhtari and Carla Reichard was administered to D.El.Ed. students in the Bhojpur District through a Google Form. This scale evaluates three metacognitive strategies:

- a) Global Reading Strategies which are generalised, intentional reading strategies that help set the purpose of reading and meaning-making in the reader.
- b) Problem-solving strategies that help students navigate through the text skilfully so that the reader can overcome problems when the reading of the text becomes difficult
- c) Support Reading Strategies that help the reader use reference materials notes or other media to help gain a better understanding of the text.

The tool has statements regarding what people do when they read academic or school-related materials such as textbooks, library books, etc. Each statement is followed by five numbers (1, 2, 3, 4, 5) whereby

- 1) means "I never or almost never do this." Reading and Reflection
- 2) means "I do this only occasionally."
- 3) means "I sometimes do this." (About 50% of the time.)
- 4) means "I usually do this."
- 5) means "I always or almost always do this."

There are no right or wrong answers to the statements in this inventory

Results and Discussion

1. Level of Metacognitive Awareness of Reading Strategies Among Prospective Elementary Teachers

Objective: To determine the level of metacognitive awareness of reading strategies among prospective elementary teachers.

Table 1: The level of Metacognitive Awareness of Reading Strategies among prospective elementary teachers.

Dimensions		Low	Moderate	High
Global Reading Strategies	Percentage	15.38%	73.51%	11.11%
	No.	18	86	13
Problem-Solving Strategies	Percentage	17.98%	67.52%	14.53%
	No.	21	80	17
Support Reading Strategies	Percentage	15.38%	69.24%	15.38%
	No.	18	81	18
Meta Cognitive Awareness Total	Percentage	16.24%	63.25%	20.51%
	No.	19	74	24

Table 1 presents the levels of Metacognitive Awareness of Reading Strategies among prospective elementary teachers, divided into three dimensions: Global Reading Strategies, Problem-Solving Strategies, and Support Reading Strategies. Most prospective elementary teachers (73.51%) have a moderate level of global reading strategies awareness. A smaller proportion exhibit high awareness (11.11%), while a similar small proportion have low awareness (15.38%). Regarding Problem-Solving Strategies, the majority (67.52%) also fall into the moderate category for problem-solving strategies. There is a higher percentage of individuals with low awareness (17.98%) compared to high awareness (14.53%). Regarding global reading strategies, the distribution here is similar to the global reading strategies, with most teachers (69.24%) having a moderate level of awareness. The percentages for low and high awareness are equal (15.38%). Aggregating all dimensions, the majority of prospective elementary teachers (63.25%) have a moderate level of overall metacognitive awareness of reading strategies. Interestingly, the percentage of teachers with high awareness (20.51%) is higher than those with low awareness (16.24%).

2. Relationship Between Global Reading Strategies and Problem-Solving Strategies

Hypothesis 1: There is no significant relationship between global reading strategies and problem-solving strategies of metacognitive awareness among prospective elementary teachers.

Table 2: Correlations between Global reading strategies and Problem-solving strategies

		Global Reading	Problem-Solving
Global Reading	Pearson Correlation	1	.922**
	Sig. (2-tailed)		.000
	N	117	117
Problem-Solving	Pearson Correlation	.922**	1
	Sig. (2-tailed)	.000	
	N	117	117

**Correlation is significant at the 0.01 level (2-tailed)

The analysis presented in Table 2 indicates a statistically significant positive relationship between global reading strategies and problem-solving strategies among prospective elementary teachers. This is demonstrated by a correlation coefficient (r) of 0.992, which suggests an extremely strong positive correlation, and a p -value less than 0.01, indicating that the relationship is statistically significant at the 1% level. This means that as the use of global reading strategies increases, the use of problem-solving strategies also tends to increase significantly, and vice versa.

3. Relationship Between Global Reading Strategies and Support Reading Strategies

Hypothesis 2: There is no significant relationship between global reading strategies and support reading strategies of metacognitive awareness among prospective elementary teachers.

Table 3: Correlations between Global reading strategies and Support reading strategies

		Global Reading	Support Reading
Global Reading	Pearson Correlation	1	.907**
	Sig. (2-tailed)		.000
	N	117	117
Support Reading	Pearson Correlation	.907**	1
	Sig. (2-tailed)	.000	
	N	117	117

**Correlation is significant at the 0.01 level (2-tailed)

The analysis presented in Table 3 indicates that there is a statistically significant positive relationship between global reading strategies and support reading strategies among prospective elementary teachers. This is evidenced by a correlation coefficient (r) of 0.907, which suggests a strong positive correlation, and a p-value less than 0.01, indicating that the relationship is statistically significant at the 1% level. This means that as the use of global reading strategies increases, the use of support reading strategies also tends to increase significantly, and vice versa.

4. Relationship Between Problem-Solving Strategies and Support Reading Strategies

Hypothesis 3: There is no significant relationship between problem-solving strategies and support reading strategies of metacognitive awareness among prospective elementary teachers.

Table 4: Correlations between Problem-solving strategies and Support Reading Strategies

		Global Reading	Problem-Solving
Global Reading	Pearson Correlation	1	.892**
	Sig. (2-tailed)		.000
	N	117	117
Problem-Solving	Pearson Correlation	.892**	1
	Sig. (2-tailed)	.000	
	N	117	117

**Correlation is significant at the 0.01 level (2-tailed)

The analysis presented in Table 4 indicates a statistically significant positive relationship between problem-solving strategies and support reading strategies among prospective elementary teachers. This is demonstrated by a correlation coefficient (r) of 0.892, which suggests a strong positive correlation, and a p-value less than 0.01, indicating that the relationship is statistically significant at the 1% level. This implies that as the use of problem-solving strategies increases, the use of support reading strategies also tends to increase significantly, and vice versa.

Findings

The results show a highly significant correlation between the three dimensions of metacognitive awareness of reading strategies. Specifically,

there is a highly significant correlation between global reading strategies and problem-solving strategies, between global reading strategies and support reading strategies and between problem-solving strategies and support reading strategies.

Conclusion

This study indicates that metacognitive awareness of reading strategies significantly improves understanding and comprehension, thereby enhancing the reader's performance. Metacognitive awareness is crucial for teachers to master the content they need to convey to their students. It helps teachers manage information more effectively and guide their students in training their thought processes, making connections between skills and strategies to overcome challenges in reading.

Teachers, as researchers, can identify the strategies that are most suitable for each student or encourage students to reflect and identify the strategies that enhance their potential. In today's educational landscape, it is essential for prospective teachers to self-regulate and be aware of metacognitive strategies to excel in their performance.

Moreover, fostering metacognitive awareness in reading strategies empowers teachers to create a more adaptive and personalized learning environment. By understanding and applying these strategies, teachers can better address diverse learning needs, promote critical thinking, and support lifelong learning skills in their students. Ultimately, this enhances not only academic success but also the overall cognitive development of both teachers and students.

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Subjective Happiness as a Mediator between Perceived Stress and Resistance to Change among College Teachers

Abstract

A subjectively happy person is a mentally healthy person and irrespective of life's hurdles they still are happy and possess increased psychological well-being. This study investigated the mediating role of subjective happiness on the relationship between perceived stress and resistance to change among college teachers. A correlational study was done to determine the relationship between the three variables, and the results showed that subjective happiness is negatively correlated with perceived stress and resistance to change. On the other hand, resistance to change is negatively correlated with subjective happiness but has a positive relationship with perceived stress. A mediation analysis was carried out to determine the mediation effect of subjective happiness on perceived stress and resistance to change. The results showed that there is a mediating effect and that subjective happiness completely mediates the relationship between perceived stress and resistance to change. The findings of this study state that it is important to focus upon subjective happiness in order for teachers to avoid resisting to change and for diminished appraisal of events as stressful.

Key Words: Happiness, Perceived Stress, Resistance, Change, Well-Being