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Metacognitive Awareness of Reading Strategies and Comprehension Skills: A Correlational Study of Elementary Education Students

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ABSTRACT

This study explores the metacognitive awareness of reading strategies and comprehension skills of a correlational study of Elementary Education students. The Philippines ranked in the lowest position in reading comprehension scores based on the PISA data, which was 340 points below the international average. These lowest scores reflected continuous challenges such as limited phonological awareness, difficulty in word identification, and vocabulary issues. This may hinder academic achievement, especially for college students. Utilizing a non-experimental quantitative approach, specifically a correlational approach, the relationship between metacognitive awareness of reading strategies and comprehension skills among BEED students. A total of 153 students participated in this study by using validated questionnaires to measure the level of metacognitive awareness of reading strategy and the level of comprehension skills. The finding reveals the strong positive relationship between metacognitive awareness of reading strategies and comprehension skills, specifically problem-solving, supporting reading strategy, global reading strategies. This indicates that those who are actively employed in reading strategies demonstrate higher comprehension skills. This study helps school heads understand the importance of reading techniques in enhancing the comprehension skills of learners. By grasping these concepts, school heads can clearly communicate and provide support to teachers. For the teachers to give them knowledge about reading strategies to improve their comprehension skills, it is essential to provide proper training and continuous support. For future researchers, it served as a reference for those who wanted to explore this study. Lastly, for the learners, it gives them valuable lessons.

INTRODUCTION

Reading comprehension is a constant academic challenge, particularly for students in teacher education programs who need proficient reading skills for their future teaching careers (Damayanti *et al.*, 2025). According to PISA data, the Philippines ranked low in reading comprehension among 79 countries. The country's total score was 340, well below the international average of 487 (Baryrili *et al.*, 2023). This outcome shows that many learners struggle to comprehend, identify, and recognize words. Without these skills, learners cannot comprehend and analyze academic text. Additionally, even effective readers might struggle when the activity requires critical thinking and understanding a complex narrative (Selvathurai & Ismail, 2024). In this case, it is evident that the approach needs to explore alternative methods to enhance students' understanding capabilities through various text analyses, enabling them to better comprehend and gather information (Noermanzah *et al.*, 2019).

According to Desa *et al.* (2020) and Gregory and Bean (2020), reading comprehension is an important skill for college students' academic success because it enables them to comprehend, analyze, and apply knowledge across multiple disciplines. In the study by Duke *et al.* (2021), it is stated that an important relationship exists between improving reading comprehension and academic success across various educational sectors, and students who excel in comprehension are more outstanding in different reading assessments, such as critical analysis, concluding, and problem solving (Rosnaeni & Dj, 2024). Furthermore, stronger reading comprehension was associated with better academic achievement, underscoring the need to develop effective instructional strategies and interventions to support struggling readers (Protacio & Padilla, 2023).

This study aimed to examine the relationship between metacognitive awareness of reading strategies and comprehension skills among elementary education students. Specifically, it sought to assess the level of metacognitive awareness of reading strategies among elementary education students, including global reading strategy, problem-solving reading strategy, and support reading strategy. Moreover, it aimed to assess the level of reading comprehension skills among elementary education students in terms of learning preferences, motivation, techniques, and texts. In addition, the study intended to determine which dimension of reading strategies influenced reading comprehension. Finally, it aimed to determine the significant relationship between metacognitive awareness of reading strategies and reading comprehension skills of BEED students. Accordingly,

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the null hypothesis stated that there was no significant relationship between metacognitive awareness of reading strategies and reading comprehension skills at the 0.01 level of significance.

LITERATURE REVIEW

Reading strategies are important tools that learners use to understand, interpret, and retain information from written texts. Students who consistently apply appropriate reading techniques tend to perform better in comprehension assessments because strategic reading helps them organize information, address difficulties, and develop a deeper understanding of texts (Pastera *et al.*, 2024). Villanueva (2022) found that college students used metacognitive strategies, such as revising their understanding and taking breaks, when necessary, to improve their reading performance. Similarly, De Los Arcos and Oliva (2025) found that metacognitive reading strategies contribute to students' comprehension and retention of information, highlighting the importance of strategic reading among college students. The study also indicated that students' language backgrounds and use of reading strategies influenced how they interpreted written materials. Furthermore, Amina (2022) reported that students with stronger comprehension abilities demonstrated greater knowledge of reading strategies, particularly global, problem-solving, and support strategies. These findings indicate that reading strategies play an important role in helping learners regulate their comprehension during the reading process.

Metacognitive reading strategies can be classified into three major types: global reading strategies, problem-solving reading strategies, and support reading strategies (Villanueva, 2022). Global reading strategies involve planning and establishing an overall purpose for reading. These strategies include predicting information, setting goals, previewing a text, and determining how information is organized. Manh and Phan (2021) found that Vietnamese university students' English proficiency was positively associated with their use of global reading strategies to improve reading comprehension. Similarly, Anggia and Habók (2024) reported that students who effectively used global reading strategies developed stronger foundations for understanding texts. These findings suggest that global strategies help learners approach texts with a clear purpose and organize information before and during reading.

Problem-solving reading strategies are employed when learners encounter difficulties while reading. These strategies include slowing down, rereading difficult portions, adjusting reading speed, and drawing conclusions. Habók *et al.* (2024) found that students who frequently used such techniques performed better when they encountered difficult reading materials. Problem-solving strategies allow readers to recognize comprehension difficulties and adjust their reading behavior according to the demands of the text. Through these strategies, learners actively monitor their understanding and attempt to resolve problems that may interfere with comprehension.

Support reading strategies provide additional assistance during the reading process. These strategies include underlining important information, taking notes, consulting dictionaries, and using other reference materials. Although these strategies may be used less frequently than other types of reading strategies, they can provide useful assistance to learners who experience difficulties understanding texts. Anggia and Habók (2024) found that support strategies could assist weaker readers and complement the use of global and problem-solving strategies. Thus, support reading strategies provide learners with additional resources for clarifying unfamiliar information and maintaining their understanding of written texts.

Reading comprehension involves the ability to understand, interpret, analyze, and apply information obtained from written materials. It is not limited to recognizing words but also requires learners to construct meaning from information presented in a text. Duke and Cartwright (2021) emphasized the importance of reading comprehension across educational settings, particularly in activities requiring analysis, inference, and problem-solving. In the Philippine context, Cabural and Infantado (2023) found that Grade 10 students demonstrated low proficiency in reading comprehension, particularly in inferential and evaluative comprehension, highlighting the difficulty learners may experience when understanding both explicit and implicit information in texts. Rosnaeni and Dj (2024) similarly reported that students with stronger comprehension abilities performed better in reading assessments involving critical analysis and drawing conclusions. Protacio and Padilla (2023) further associated stronger reading comprehension with better academic achievement. These findings demonstrate that effective comprehension requires learners to actively process and integrate information rather than simply recognize individual words.

The relationship between reading strategies and comprehension can be further understood through students' metacognitive awareness. Metacognitive awareness involves learners' understanding of their own cognitive processes and their ability to regulate those processes during learning. In reading, this includes planning how to approach a text, monitoring comprehension while reading, and evaluating understanding after reading. Navarro (2021) found that difficulties in reading comprehension could affect students' critical thinking, independence, and academic achievement. Baki (2025) further reported that students who were unfamiliar with metacognitive reading strategies experienced greater difficulties in understanding complex texts. De-La-Peña and Luque-Rojas (2021) also found that college and university students may perform adequately in basic comprehension while experiencing difficulties with deeper, critical, and inferential understanding. These findings suggest that awareness and regulation of

reading processes are important components of effective comprehension.

The theoretical foundation of the study is supported by the Simple View of Reading (SVR) proposed by Gough and Tunmer (1986). The theory explains reading comprehension through the interaction of two major components: word decoding and language comprehension. Word decoding refers to the ability to recognize and process written words, while language comprehension involves understanding vocabulary, grammar, and overall meaning. The framework provides a basis for understanding reading comprehension as an outcome of the interaction between the ability to process written words and the ability to understand language. Pastera *et al.* (2024) further discussed the role of cognitive processes involved in processing, retaining, and integrating information during reading.

Metacognitive Theory provides further support for understanding the role of reading strategies in comprehension. Flavell (1979) emphasized learners' awareness of their own cognitive processes and their ability to manage these processes. In reading, metacognitive processes involve planning, monitoring, and evaluating understanding. These processes are reflected in reading behaviors such as predicting, questioning, clarifying, rereading, and summarizing. Through metacognitive awareness, learners can identify whether they understand a text and modify their reading strategies when difficulties arise.

Self-Regulated Learning (SRL) Theory also provides a framework for understanding how students actively manage their learning processes. Zimmerman (2002) explained that learners regulate their learning by setting objectives, selecting appropriate strategies, monitoring their progress, and evaluating their performance. In reading, self-regulated learning may involve establishing a purpose for reading, selecting appropriate reading strategies, monitoring comprehension, and assessing whether the selected strategies have been effective. Thus, the use of global, problem-solving, and support reading strategies can reflect students' active regulation of their reading processes.

The integration of the Simple View of Reading, Metacognitive Theory, and Self-Regulated Learning Theory provides a comprehensive basis for understanding reading comprehension and metacognitive reading strategies. The Simple View of Reading explains the fundamental components involved in comprehension, while Metacognitive Theory and Self-Regulated Learning Theory explain how learners actively manage their cognitive processes during reading. Metacognitive awareness allows learners to monitor, control, and evaluate their reading behaviors, while self-regulated learning emphasizes the active management of strategies toward learning goals. Together, these perspectives support the view that strategic and reflective reading behaviors may contribute to more effective comprehension.

Previous research therefore demonstrates the relevance of examining metacognitive awareness of reading strategies in relation to reading comprehension. Students' use of global, problem-solving, and support strategies has been associated with their ability to manage reading difficulties and understand written materials (Amina, 2022; Anggia & Habók, 2024; Habók *et al.*, 2024). At the same time, difficulties in deeper comprehension remain evident among college and university students (De-La-Peña & Luque-Rojas, 2021). Despite these findings, limited research has specifically examined the relationship between metacognitive awareness of reading strategies and reading comprehension skills among Bachelor of Elementary Education students (Quiamco & Guadalupe, 2025). This gap supports the need to further examine the extent to which global, problem-solving, and support reading strategies are associated with the reading comprehension skills of BEED students.

MATERIALS AND METHODS

Research Respondents

The respondents of this study were the first- to third-year students of the College of Teacher Education. The entire population of 251, then 153, was eligible as the research population corresponding to the college level. The researchers used universal sampling, including all eligible individuals who met the criteria. This sampling approach is used to achieve accurate and reliable outcomes (Wisdomlib, 2025).

This survey was intended only for Elementary Education students, and other programs were excluded from the study. Moreover, students not enrolled in the 2025-2026 school year were excluded from the study. This process was voluntary, allowing eligible respondents to choose whether to participate in the survey, ensuring ethical practices and respect for participants' opinions. Free participation was an important principle in research ethics; students were not required to participate, and information was collected only after they gave consent. In this case, this study made it more reliable (Munford *et al.*, 2021).

Research Instruments

The researchers modified and enhanced the survey questionnaire to improve its quality. This was the major tool of the research. The survey was divided into two major components. The independent variable, Metacognitive Awareness of Reading Strategy, was measured using the Metacognitive Awareness of Reading Strategies Inventory (MARSI) of Mokhtari and Reichard (2002) as adapted by Tejida and Raymundao (2025). This 30-item questionnaire measures students' awareness and use of three categories of reading strategies: global reading, problem-solving, and support reading. While the dependent variable, which is the Reading Comprehension Skills, was measured using a modified survey questionnaire which was adapted from Wuthisingchai and Stopps (2018), as cited by Aratea (2023) in the study "Relationship of Vocabulary Mastery and Reading Comprehension of 2nd Year BSED English

Major Students of Gordon College A.Y. 2021–2022. The survey questionnaire consisted of 20 items designed to measure factors affecting reading comprehension, including learning preferences, motivation, techniques, and text.

In a 5-point Likert scale, the scores are categorized as follows: 4.21–5.00 (very high), indicating that the statement is always true and the behavior or attitude is consistently practiced in terms of reading strategies and reading comprehension; 3.41–4.20 (high), indicating that the statement is often true and usually practiced; 2.61–3.40 (moderate), indicating that the statement is sometimes true and occasionally practiced; 1.81–2.60 (low), indicating that the statement is rarely true and seldom practiced; and 1.00–1.80 (very low), indicating that the statement is never true and not practiced at all.

Research Design and Procedures

This study used a non-experimental quantitative design, specifically a correlational approach, to investigate the relationship between metacognitive awareness of reading strategies and reading comprehension skills among BEED students. As explained by Creswell (2019) and Ary *et al.* (2019), correlational research is ideal when the goal is to describe and measure the relationship between two variables without attempting to change or control them. This study analyzed metacognitive awareness of reading comprehension skills as dependent variables; both were measured in students' regular school settings. This design was an ideal correspondence. It enabled the study to focus on existing correlations rather than attempt to demonstrate a significant relationship, thereby clarifying the relationship between these two variables.

The researchers investigated thoroughly and ethically. Before beginning their research, they secured approval and received consent from their research adviser and the Dean of the College. Before the researchers began collecting data, they obtained these approvals to ensure that the study met the institution's academic and ethical requirements. After acquiring the appropriate approvals, the researchers worked with the selected individuals. Data were gathered using two study tools: the Metacognitive Awareness of Reading Strategies inventory (MARSI) and a reading comprehension questionnaire. To ensure its validity and reliability, the questionnaire was carefully designed, expertly validated, and tested in a pilot study.

The surveys and reading comprehension tests were administered during regular class hours to avoid disrupting the students' academic activity. Before data collection for each session, the researchers described the study's goal, assured participants that their responses would be kept confidential, and obtained their informed consent. Participants were given clear instructions to help them complete the research instruments correctly, and sufficient time was provided to answer each item thoroughly. Data were collected during three weeks in the second semester of the Academic Year 2025-2026. After all responses were gathered, the researchers checked each questionnaire for completeness and entered the data into a secure database for statistical analysis.

The collected data were initially evaluated using descriptive statistics such as frequency counts, mean, and standard deviation, to provide a concise picture of the respondents' metacognitive awareness and reading comprehension. The mean was used to calculate the average level of metacognitive awareness and reading comprehension among the students. In contrast, the standard deviation indicated how tightly or widely the responses were spread around the mean. These statistical measures helped describe the overall performance and variability of respondents' scores (AI-Khresheh & Ali, 2023; Manh & Phan, 2021; Vicente & Baldera, 2024).

The Pearson r correlation coefficient was used to examine the relationship between metacognitive knowledge of reading strategies and reading skills among BEED students. Inferential statistics were used to predict the direction and strength of the linear relationship (Schober, Boer, & Schwarte, 2020).

RESULTS AND DISCUSSION

Metacognitive Awareness of Reading Strategies

Table 1 depicts a total mean metacognitive awareness of reading strategies of 4.33, with an overall standard deviation of 0.43. This means students had a very high level of metacognitve awareness of reading strategies. Among the three indicators, problem-solving obtained the highest level of mean, followed by global reading strategies while support reading strategies received the lowest mean but still in very high mean category.

The outcome shows that the problem-solving strategy has a very high mean. It shows that students frequently use this strategy, indicating that slowing down, rereading, and drawing conclusions help students think more carefully and better understand the academic text. Closely followed by a global reading strategy, which had a very high mean, this suggests that respondents consistently practice it,

Table 1: Level of Metacognitive Awareness of Reading Strategies

Indicator	Mean	SD
Global Reading Strategy	.4.30**	.53**
Problem- Solving Strategy	.4.44**	.63**
Support Reading Strategy	.4.25**	.50**
Overall	**.4.33****	**.43****

helping them understand the overall meaning of a word by focusing on the main idea rather than specific details. Lastly, the support reading strategy had a very high mean, making it the third most consistently used strategy. This shows that learners employed support reading strategies to understand unfamiliar words better while reading, especially to clarify the meaning of a particular text or word.

Research by Tazkiyah and Ambarwati (2022) showed that students with higher metacognitive awareness of reading strategies perform exceptionally well in understanding and interpreting academic texts. This is also supported by the study by Manh and Le Thu Phan (2021), which found that learners with high levels of metacognitive awareness of reading strategies are most likely to monitor and control their understanding, thereby improving reading performance. Habók *et al.* and Muhid *et al.* both found that learners who employed various reading strategies performed better and demonstrated enhanced understanding of texts.

Level of Comprehension Skills

Table 2 shows the overall mean level of comprehension skills of 4.37 with an overall standard deviation of .39. It reveals that students had a very high level of comprehension skills. Among the four indicators, the text obtained the highest mean, closely followed by learning preferences, while motivation ranked third. Lastly, the technique got a very lowest mean score, nevertheless all indicators were rated a very high mean.

Table 2: Level of Comprehension Skills

Indicator	**Mean**	**SD**
Learning Preferences	.4.40**	.45**
Motivation	.4.34**	.52**
Techniques	.4.26**	.54**
Text	.4.50**	.46**
Overall	**.4.37****	**.39****

Based on the results, the text had a very high mean, indicating that consistent practice with reading passages can positively impact reading comprehension. This implies that an organized, systematic text is simple for the student to understand. Closely followed by learning preferences, which got a very high mean, which means students consistently practiced using specific learning preferences, particularly identifying the main idea, which assists in comprehension. Finding the main idea helps students who have difficulty comprehending a text understand it more quickly. Meanwhile, motivation had a very high mean, indicating that a state of motivation helps students enhance their academic performance and comprehension. Lastly, techniques also have a very high mean, indicating that students consistently practice various techniques, especially identifying major and minor details, which improves their understanding.

This result is consistent with the findings of Nurjanah and Putri (2023), who showed that students with higher levels of comprehension skills perform well in understanding the text's deeper meaning and in critical and creative thinking. On the other hand, this is also supported by Espia and Cortezan (2023), who found that students with higher levels of comprehension frequently earn outstanding grades or achieve higher academic performance. Similarly, a study by Gregory and Bean (2021) finds that students with excellent comprehension skills demonstrate good academic performance in college because they understand their lessons effortlessly.

Relationship between Metacognitive Awareness of Reading
Strategies and Comprehension Skills

Table 3 data reveal a strong, significant positive relationship between metacognitive awareness of reading strategies and comprehension skills. The Spearman's Rho analysis revealed that overall metacognitive awareness of reading strategies is highly influential, with a significant relationship ($p = .000$) and a strong positive correlation ($r = .705$). Among the components, global reading strategies demonstrate a strong relationship with comprehension ($r = .706$), followed by support reading strategies ($r = .599$) and problem-solving strategies ($r = .535$), all with significant values ($p = .000$). These results indicate that students who show a higher level of metacognitive awareness and the use of reading strategies tend to have better reading comprehension skills. This highlights the significance of metacognitive awareness in developing students' ability to understand and process texts efficiently.

All indicators of metacognitive awareness of reading strategies show a positive correlation with reading comprehension, but the strength of the relationship varies by strategy. The Global reading strategies have the strongest impact among all the reading strategies indicators. This demonstrates the importance of planning, monitoring, and assessing reading processes for comprehension. Support reading strategies and problem-solving strategies both contribute in important ways, but to a lesser extent. The results imply that students who actively employ a different

Table 3: Correlation between Metacognitive Awareness of Reading Strategies and Comprehension Skill

Reading Comprehension Skills	Reading Strategies			
	Global Reading Strategy	Problem-Solving Strategy	Support Reading Strategy	Overall
Learning Preferences	432** .000	.305** .000	.375** .000	.441**
Motivation	.602** .000	.476** .000	.500** .000	.597**
Techniques	.632** .000	.465** .000	.563** .000	.646**
Text	.519** .000	.505** .000	.446** .000	.525** .000
Overall	.706** .000	.535** .000	.599** .000	.705** .000

***p< 0.001*

range of strategies, such as organizing information, resolving different comprehension challenges, and utilizing support resources, are more likely to achieve a higher level of comprehension. Overall, the findings indicate that enhancing students' metacognitive awareness of reading strategies may improve reading comprehension.

These findings align with other recent studies highlighting the significance of metacognitive reading strategies. Al-Khresheh and Ali (2023) reported that students who actively used planning, monitoring, and support methods showed improved reading comprehension. Additionally, Duke *et al.* (2021) found that effective reading strategies increase students' capacity to perceive, analyze, and synthesize information from texts, thereby improving academic achievement. Further, Paster *et al.* (2024) highlighted that the combination of metacognitive awareness and strategy utilization bridges knowledge gaps and promotes cognitive processing. Generally, these studies provide evidence that strategic reading practices, developed through students' skills and techniques, are crucial to promoting deeper understanding and academic performance.

CONCLUSION

The study found that Elementary Education students had a very high level of metacognitive awareness of reading strategies and strong reading comprehension skills. They commonly used problem-solving, global, and support reading strategies, including rereading, identifying main ideas, and using references to improve their understanding of texts. The results also showed a significant relationship between metacognitive awareness of reading strategies and reading comprehension skills. This indicates that students who frequently plan, monitor, and evaluate their reading tend to demonstrate higher levels of comprehension. However, the moderate strength of the relationship suggests that other factors may also influence reading success.

Among the three domains, problem-solving strategies were used most frequently, followed by global and support strategies. This suggests that students adjust their reading when they encounter difficulties and are able to select strategies before, during, and after reading. Although support reading strategies received the lowest mean, they were still classified as high, indicating that students continued to use them extensively. The findings suggest that students were less likely to use support strategies compared with the other strategies, particularly those involving interaction with others to deepen their understanding. The findings are consistent with the Simple View of Reading, which emphasizes the role of decoding and language comprehension in reading comprehension, as well as Metacognitive Theory and Self-Regulated Learning Theory, which emphasize planning, monitoring, evaluating, and managing learning processes.

To strengthen the use of support reading strategies, school administrators may establish collaborative learning activities such as reading circles, peer discussions, and other literacy activities that allow students to exchange ideas and perspectives. Teachers may also incorporate group projects, think-pair-share activities, and guided peer discussions to provide students with opportunities to discuss and reflect on their reading. Students are encouraged to actively participate in peer discussions as part of their reading practice, as exchanging ideas can clarify concepts, improve comprehension, and develop communication skills. Future researchers may further examine reading strategies, collaborative discussions, and other instructional interventions that can encourage meaningful reading activities and provide a deeper understanding of how metacognitive awareness develops and contributes to reading comprehension.

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