

SCRUTINIZING PAPUAN EFL STUDENTS' READING COMPREHENSION IN THE LIGHT OF METACOGNITIVE STRATEGIES

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Abstract: Reading comprehension is a crucial skill for English as a Foreign Language (EFL) learners; however, many students in Papua Pegunungan continue to face challenges due to low literacy levels, limited motivation, and ineffective reading strategies. This study investigated the role of metacognitive strategies in enhancing students' reading comprehension by exploring 3 research questions: 1) To what extent do EFL students in Papua Pegunungan use metacognitive strategies, particularly planning, monitoring, and evaluation, in reading comprehension? 2) What is the level of EFL students' reading comprehension? and 3) How do metacognitive strategies contribute to their reading comprehension outcomes?. A mixed-method design was employed, involving 35 undergraduate students at STKIP Kristen Wamena. Data were collected through a reading comprehension test, the Metacognitive Awareness of Reading Strategies Inventory (MARSI), and semi-structured interviews with 10 selected participants. Quantitative data were analyzed using descriptive statistics and Pearson correlation, while qualitative data were analyzed thematically. The findings showed that most students achieved a medium level of comprehension (62.9%), followed by low (22.8%) and high levels (14.3%), with difficulties in higher-order skills such as inference and integration. Furthermore, students reported moderate use of metacognitive strategies ($M = 3.2$), with monitoring used most frequently. In addition, correlation analysis revealed a significant positive relationship between metacognitive strategies and reading comprehension, particularly monitoring strategies ($r = 0.62, p < 0.01$). These findings highlighted the importance of explicit instruction in metacognitive strategies and the need to enhance students' motivation to support deeper reading comprehension.

Keywords: Metacognitive strategies; Papuan EFL students; Reading Comprehension

INTRODUCTION

Reading comprehension is one of the most essential skills in learning English as a foreign language (EFL). It plays a central role in students' academic development and their ability to engage in lifelong learning. Mercado and Manzano (2024) defined reading comprehension as the process of constructing meaning by working with written language. In line with this, Afflerbach et al. (2020) emphasized that reading comprehension is more than just decoding words on a page. It is a thinking activity that involves analyzing ideas, making conclusions, and combining information. It indicates that effective comprehension requires the interaction of multiple skills, including vocabulary knowledge, background knowledge, word recognition, and the use of strategies (Spencer et al., 2019). Thus, reading comprehension can be seen as a dynamic process in which readers actively use their knowledge, skills, and strategies to comprehend academic texts.

In order to develop strong comprehension abilities in the EFL context, students can utilize

metacognitive strategies that can help them achieve reading comprehension effectively. These strategies can be conceptualized as individual's ability to regulate their knowledge within the learning process. In other words, metacognition refers to students' awareness and control of both the processes and products of learning. According to Mercado and Manzano (2024), these strategies involve self-monitoring and self-regulation, which make readers more conscious in applying strategies to improve comprehension. It indicates that through metacognitive strategies, students can engage in continuous self-monitoring, allowing for step-by-step evaluation of their understanding (Hasani & Pahamzah, 2022).

In accordance with these strategies, Andriani and Mbato (2021) divided it into three phases, namely, planning, monitoring, and evaluation. In the planning phase, students think carefully about the reading topic, set their goals, and choose appropriate strategies before reading. They may skim the text, check headings and subheadings, connect prior knowledge, and make predictions about the content (Mercado & Manzano, 2024). In the monitoring phase, students track their understanding during reading by making connections, checking predictions, using context clues, and asking questions about the text (Muhid et al., 2020). Monitoring is very crucial, since comprehension depends on how effectively students can regulate their progress. Finally, in the evaluation phase, students measure their understanding after reading. This can be done by summarizing, paraphrasing, checking predictions, and reflecting critically on the information gained (Pahrizal et al., 2025). If comprehension is insufficient, readers may re-read and adjust their strategies again.

Over the past decade, research has strongly confirmed that metacognitive strategies are essential tools in improving reading comprehension. According to Muhid et al. (2020), using these strategies students will be able to enhance their reading comprehension. Besides that, they can achieve better results in reading and learning programs (Bernardo & Mante-Estacio, 2023). Moreover, metacognitive strategies help students control their own learning (Anggia & Habók, 2024), develop problem-solving skills (Teng & Zhang, 2021), and become more aware of their strengths and weaknesses (Lu et al., 2022). Suharni et al. (2024), also confirmed that students who practice metacognitive strategies are able to regulate themselves, adapt reading approaches, and read more effectively. Similarly, Hasani and Pahamzah (2022) found that the use of planning, monitoring, and evaluating helps students overcome reading difficulties. Therefore, it can be drawn a conclusion that metacognitive strategies are powerful tools which enable students to predict, regulate, assess their understanding and comprehend academic texts more effectively.

Although metacognitive strategies have been widely examined internationally, little attention has been given to its role in the Papuan context, particularly in Papua Pegunungan. This gap is critical, since Papuan students still face serious educational challenges, including persistently low

literacy levels. According to Robertson et al. (2018) Papua region has consistently ranked among the lowest provinces in Indonesia in terms of the Human Development Index (HDI). Besides that, the level of literacy skills still became the lowest compared to other provinces (Triyanto, 2019). Furthermore, the 2018 Education Gini Index reveals substantial inequalities in access to learning resources and quality of education (Harahap et al., 2020). These conditions underscore how limited literacy skills hinder students' reading comprehension, especially when dealing with complex academic texts.

Therefore, this study aimed to investigate how metacognitive strategies can support EFL learners in Papua Pegunungan. Specifically, it addressed the following questions: 1). To what extent do EFL students in Papua Pegunungan use metacognitive strategies, particularly planning, monitoring, and evaluation, in reading comprehension? 2). What is the level of EFL students' reading comprehension, especially in relation to higher-order skills such as inference, integration, and evaluation? and 3). How do metacognitive strategies contribute to their reading comprehension outcomes?

METHOD

This study employed a mixed-method design to investigate the relationship between metacognitive strategies and reading comprehension among EFL students. The combination of quantitative and qualitative approaches enabled a more comprehensive understanding of the research problem (Creswell, 2014).

The participants were 35 undergraduate EFL students from STKIP Kristen Wamena, Papua Pegunungan. They were selected using purposive sampling, as they represent prospective EFL teachers in a region where literacy remains a significant challenge. All participants were in their second or third year of study and had completed basic English courses. Participation was voluntary, and informed consent was obtained prior to data collection.

In collecting the data, three instruments were used: a reading comprehension test, a questionnaire, and semi-structured interviews. First, the reading comprehension test was administered to measure participants' ability to understand academic texts through multiple-choice and short-answer items. Second, the Metacognitive Awareness of Reading Strategies Inventory (MARSII) developed by Mokhtari and Reichard (2002) was used to examine students' metacognitive strategy use, including global (planning), problem-solving (monitoring), and support (evaluating) strategies, measured using a five-point Likert scale. Third, semi-structured interviews were conducted with 10 selected students representing high, medium, and low levels of reading achievement. The interviews explored students' strategy

use, reading experiences, and challenges. Each session lasted approximately 30–45 minutes, was conducted in Bahasa Indonesia and English, and was audio-recorded and transcribed.

In analyzing the data, both quantitative and qualitative techniques were applied. The quantitative data were analyzed using SPSS version 26.0 to compute descriptive statistics, including mean, median, percentage, and standard deviation. Pearson correlation analysis was then used to examine the relationship between metacognitive strategies and reading comprehension. Meanwhile, the qualitative data were analyzed thematically by coding and categorizing the interview data into planning, monitoring, and evaluation. Triangulation was applied by comparing findings from the test, questionnaire, and interviews to enhance the validity and reliability of the results.

FINDING AND DISCUSSION

This study examined the role of metacognitive strategies in improving reading comprehension among 35 EFL students at STKIP Kristen Wamena by combining quantitative and qualitative data. The results show the students' levels of comprehension, their use of strategies, and the relationship between the two, supported by interview findings.

Reading Comprehension Performance

Since this study aimed to examine students' reading performance, their comprehension levels were measured and presented in descriptive statistics. The results are shown as follows.

Table 1.

Score Range	Level	Frequency	Percentage
75–100	High	5	14.3%
50–74	Medium	22	62.9%
Below 50	Low	8	22.8%
Total		35	100%

The results of the reading comprehension test showed that most students (62.9%) were at a medium level, while 14.3% achieved a high level and 22.8% were at a low level. It indicated that EFL students at STKIP Kristen Wamena possessed basic reading skills but continued to face difficulties in understanding complex academic texts. While they were able to identify main ideas and explicit information, they struggled with inferential questions, drawing conclusions, and evaluating information.

These findings were consistent with Andriani and Mbato (2021), who argued that reading comprehension extends beyond decoding and requires active engagement with the text. It involves higher-order cognitive processes such as inference, synthesis, and monitoring (Muhid

et al., 2020). The predominance of medium-level performance suggested that students tended to rely on literal comprehension rather than deeper meaning construction. Similarly, Bonganciso (2022) found that EFL learners often focus on word-level understanding, which limits their ability to interpret texts holistically.

The interview data further reinforced these results. Many students reported that they could answer questions based on explicit information but experienced difficulty with inferential tasks, indicating a reliance on surface-level processing. This pattern aligned with Pahrizal et al. (2025), who noted that EFL learners frequently depend on decoding and receiving limited instruction in higher-order reading skills. In line with this, Hasani and Pahamzah (2022) pointed out that such difficulties stemmed from insufficient training in strategic reading skills, including prediction, inference, and synthesis.

Furthermore, motivation emerged as an important factor influencing reading performance. Several students reported that academic reading was less engaging compared to social media or entertainment, which reduced their willingness to engage with texts. This statement was supported by Triyanto (2019), who emphasizes the role of motivation in sustaining reading engagement and supporting the use of higher-order strategies such as analysis and evaluation. Students with low motivation tend to exert less effort in processing challenging texts (Romrome & Sari, 2025)

Thus, these findings indicated that students' reading comprehension remains at a basic level and is constrained by limited higher-order thinking skills and low motivation. This was consistent with Anggia and Habók (2024), study, which emphasized the importance of metacognitive awareness and strategic reading. Therefore, it can be concluded that EFL students in Papua Pegunungan still possessed foundational literacy skills but continued to rely on literal comprehension. Their difficulties in inference, integration, and evaluation highlight the need for explicit instruction in higher-order reading strategies. As noted by Bernardo and Mante-Estacio (2023), effective reading comprehension requires critical thinking and active engagement with texts.

The Use of Metacognitive Strategies

In measuring Papuan EFL students' metacognitive strategies, The MARSII questionnaire was employed. The results can be viewed as follows.

Table 2.

Strategy Category	Examples of Behaviors	Mean	Level
Global (Planning)	Setting goals, previewing, making predictions	3.0	Medium

Problem-Solving (Monitoring)	Guessing meaning, rereading, adjusting pace	3.5	High
Support (Evaluating)	Summarizing, paraphrasing, reflecting	3.1	Medium
Total		3.2	Medium

Based on the table above, the results of the MARSII questionnaire showed that Papuan EFL students used metacognitive reading strategies at a moderate level ($M = 3.2$). Among the strategies, problem-solving (monitoring) strategies were used most frequently ($M = 3.5$), followed by support (evaluating) strategies ($M = 3.1$) and global (planning) strategies ($M = 3.0$). This indicated that students tended to focus more on solving comprehension problems during reading rather than planning before reading or reflecting afterward. These findings are consistent with Deliany & Cahyono (2020), who reported that EFL learners often rely more on monitoring strategies than on planning or evaluation.

The interview data further reinforced these findings. Most students reported that they began reading without activating prior knowledge, identifying purposes, or setting clear intentions, indicating a limited use of planning strategies. For example, one student stated, “*I just start reading without thinking about what I want to find*”. This reflected a lack of strategic preparation before reading, which may hinder deeper comprehension. It suggests that the participants have not yet developed sufficient planning skills, which are essential for guiding reading processes, improving comprehension, and fostering learner independence (Bonganciso, 2022; Pahrizal et al., 2025).

On the other hand, many students mentioned that they tend to use reading strategies such as re-reading difficult parts, slowing down, and using dictionaries to understand unfamiliar words. These behaviors indicate that they actively monitored their understanding during the reading process. Through these strategies, students are able to identify comprehension breakdowns and make necessary adjustments to maintain meaning-making (Khellab et al., 2022; Suharni et al., 2024).

However, the use of evaluation strategies was relatively limited. Only a few students reported reviewing or summarizing the text after reading. Most students rarely reflected on their understanding, indicating weak use of post-reading strategies. The findings were consistent with Bernardo and Estacio (2023), who noted that evaluation strategies are essential for deeper understanding and long-term retention. These evaluation strategies, such as summarizing, paraphrasing, and self-questioning enable EFL students to assess comprehension critically and internalize key ideas (Anggia & Habók, 2024). Thus, without reflection, students may fail to identify gaps in their comprehension.

To sum up, the findings indicated that Papuan EFL students demonstrated uneven use of

metacognitive strategies, with a strong reliance on monitoring but limited engagement in planning and evaluation. As highlighted by Muhid et al. (2020), effective reading requires a balance of planning, monitoring, and evaluation. Therefore, students' dependence on monitoring strategies suggests partial metacognitive awareness, which may limit their comprehension and critical reading skills.

To address this issue, explicit instruction in metacognitive strategies is necessary. Teachers should guide students in applying planning, monitoring, and evaluation strategies through activities such as think-alouds, self-questioning, and reflection (Afflerbach et al. 2020; Teng & Zhang, 2021). In addition, the use of engaging and culturally relevant materials (Romrome & Ena, 2022) as well as digital tools (Liu & Zhang, 2024) may help increase students' motivation and support strategic reading development.

Relationship Between Strategy Use and Reading Comprehension

A correlational analysis was conducted to examine the relationship between students' use of metacognitive strategies and their reading comprehension performance. The results of this analysis are presented in the table below.

Table 3.

Strategy Phase	Correlation Coefficient (r)	Significance (p)	Strength of Relationship
Planning	0.48	0.01	Moderate Positive
Monitoring	0.62	0.01	Strong Positive
Evaluation	0.55	0.01	Moderate Positive
Total	0.55	0.01	Moderate Positive

The correlational analysis presented in Table 3 indicated that all three phases of metacognitive strategy use (planning, monitoring, and evaluation) were positively correlated with reading comprehension among Papuan EFL students. Monitoring strategies showed the strongest correlation ($r = 0.62$, $p = 0.01$), followed by evaluation ($r = 0.55$, $p = 0.01$) and planning ($r = 0.48$, $p = 0.01$). These findings suggested that students who actively applied metacognitive strategies tended to achieve better reading comprehension outcomes.

These results were consistent with previous studies. Hasani and Pahamzah (2022) reported a significant positive relationship between metacognitive strategy use and reading comprehension among EFL learners. Similarly, Suharni et al. (2024) found a strong correlation between metacognitive awareness and reading achievement.

However, the correlations in this study were moderate, particularly for planning and evaluation strategies. It indicated that although these strategies contributed to comprehension,

their impact was less substantial compared to monitoring strategies. This finding was supported by Deliany and Cahyono (2020), who found that limited awareness of how to regulate and monitor reading processes may negatively affect comprehension outcomes.

In conclusion, the findings highlighted the importance of metacognitive strategies in supporting reading comprehension. While monitoring plays a dominant role, planning and evaluation remain essential. Therefore, instruction should emphasize the balanced development of all three strategies to improve students' reading performance.

CONCLUSION

This study examined the role of metacognitive strategies in improving reading comprehension among 35 EFL students at STKIP Kristen Wamena. The findings showed that although students were able to identify main ideas and supporting details, they faced difficulties with higher-order skills such as inference, integration, and evaluation. Monitoring strategies were used most frequently, while planning and evaluation were less applied, indicating a tendency toward reactive rather than strategic reading. Low motivation further limited students' engagement with academic texts.

However, this study was limited by its small sample size and reliance on self-reported data, which may affect the generalizability and accuracy of the findings. Therefore, future researchers are encouraged to involve larger and more diverse samples across different institutions to improve generalizability. In addition, the use of multiple data collection methods, such as classroom observations or experimental designs, is recommended to reduce subjective bias and provide more objective insights into students' metacognitive strategy use.

These findings highlighted the importance of explicitly teaching metacognitive strategies and fostering students' motivation in reading. By strengthening planning, monitoring, and evaluation skills, EFL learners can develop more effective and independent reading practices. Ultimately, promoting metacognitive awareness is essential for enabling students to move beyond surface-level comprehension toward deeper and more critical engagement with academic texts.

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