METACOGNITIVE STRATEGIES AS PREDICTORS OF MALAYSIAN UNDERGRADUATES' ENGLISH LANGUAGE PERFORMANCE

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Abstract: Reading forms the foundation of ESL learners' language mastery. When engaging with reading texts, the language learners must not only possess strong cognitive and linguistic skills but also effectively monitor and regulate their thinking. Due to this complexity, they often struggle with reading comprehension tasks. This study examines the relationship between the use of metacognitive strategies, namely planning, monitoring, and evaluating, and ESL learners' language performance at one public university on the east coast of Malaysia. The study employed a correlational research design to analyse the collected data from the 361 undergraduates who enrolled in English courses across their academic programmes. The results revealed significant correlations between the use of metacognitive strategies and English language performance, indicating that higher use of the strategies was associated with improved SPM English achievement. However, the metacognitive strategies had only weak associations. Thus, these findings provide insights into language instructors' roles in improving their pedagogical approaches to enhance ESL learners' reading comprehension and their overall learning outcomes, and more importantly, to nurture metacognitive awareness among these learners.

Keywords: English Language Performance, ESL Learners, Metacognitive Strategies, Reading Comprehension

1. Introduction

Reading serves as a critical component in language acquisition and skills development. It forms the foundation of ESL learners' language mastery. While reading, the learners are exposed to vocabulary, grammar and discourse patterns in meaningful contexts (Sangers et al., 2025), which, according to Laajan et al. (2024), when done extensively, brings about significant impact on their overall language usage across various subjects. As it functions as a key enhancer of overall language performance, it is deemed important for instructors to teach reading thoroughly and effectively to maximise the learners' academic outcomes.

ESL learners often struggle with reading comprehension tasks due to the complex skills and abilities required (Oakhill et al., 2014). When engaging with reading tasks, the language learners must possess strong cognitive and linguistic skills while effectively monitoring and regulating their thinking. This urges them to engage deeply with texts through various strategies and tools driven by metacognitive strategies (i.e. planning, monitoring and self-evaluation). Additionally, they are expected to selectively apply those strategies during text comprehension (Nasab & Ghafournia, 2016), and without sufficient knowledge about reading strategies, it causes these language learners to face difficulties in comprehending reading materials.

The use of metacognitive strategies is closely related to effective reading comprehension and represent essential components of successful reading (Ciprianová & Čujdíková, 2025; Shinta, 2024). However, teachers' preference of using certain strategies rather than opting for diverse reading strategies affects students' achievement in learning, particularly in complex or unfamiliar tasks (Ali & Razali, 2019). Due to this issue, the authors recommended that language teachers experiment with the reading

strategies to better cater the needs of learners who struggle to understand texts, which eventually lead to enhanced reading comprehension and learning outcomes.

Acknowledging the language learners' struggles in reading comprehension and the language teachers' challenges in reading instruction, the present study aimed to examine the relationship between the use of metacognitive strategies namely planning, monitoring and evaluating, and ESL learners' language performance. Although past research has thoroughly documented the role of metacognitive strategies in facilitating ESL learners' reading comprehension, the explanation of how these strategies relate to overall academic success remains insufficiently explored. Therefore, the current study fills this gap by examining whether SPM English results are associated with the use of metacognitive strategies.

2. Literature Review

2.1 *Metacognitive Strategies in Language Learning*

The idea of metacognition, which is commonly known as "thinking about thinking", was first introduced by John H. Flavell. In the context of language learning, Flavell (1979) elaborated that learners with metacognitive awareness can plan, monitor, and evaluate both their language use and learning progress. He further asserted that such (metacognitive) ability is pivotal in attaining second language mastery. Meanwhile, Brown, in 1987, expanded Flavell's work by dividing metacognition into two primary aspects: knowledge of cognition and regulation of cognition. The former refers to the learners' awareness of strategies, tasks, and personal capabilities, while the latter concerns the learners' ability to plan, monitor, and evaluate their own learning. Hence, this distinction has contributed to providing a clearer framework for examining how language learners manage their metacognitive processes.

Building on this foundation, O'Malley and Chamot (1990) later incorporated metacognition into the discussion of language learning strategies. They categorised these strategies into three types, namely, cognitive, social/affective, and metacognitive. Through their studies, metacognitive strategies have been identified as an integral factor that empowers learners to be independent. This is due to how metacognitive strategies - planning, monitoring, and evaluating - have made them accountable for their own learning. The strategy framework was further expanded by Horwitz and Oxford (1991), who proposed a comprehensive taxonomy of language learning strategies. Their findings also recognised metacognitive strategies to be regarded as higher-order, due to the key elements of coordination and regulation. Subsequently, Zimmerman (2002) articulated the theory of self-regulated language learning, in which he conceptualised metacognition as the central executive function, henceforth becoming a major determinant of academic performance.

2.2 *Metacognitive Strategies and Malaysians' L2 Performance*

The use of metacognitive strategies in ESL classrooms has been reported to be prevalent in improving reading performance among Malaysian learners. For instance, a recent study by Awang et al. (2024) has elucidated how metacognitive reading strategies aided the reading comprehension of tertiary ESL learners in Kelantan. This finding corroborates that of Halim et al. (2022), who identified a positive relationship between metacognitive awareness of reading strategies and reading comprehension among diploma TESL students. Similarly, Rashid et al. (2016) examined metacognitive strategies employed at the secondary level and concluded that proficient ESL readers utilise strategy awareness to help their understanding of reading tasks. Rajab et al. (2016) have also explored the patterns of metacognitive strategy using the Metacognitive Awareness of Reading Strategies Inventory (MARSI), in which they discovered that undergraduates at Universiti Teknologi Malaysia frequently employ problem-solving strategies when encountering challenging texts. Meanwhile, in the context of digital learning, Yacob and Mohamad (2023) examined how Malaysian ESL undergraduates use online metacognitive reading strategies. They discovered that learners combine global, problem-solving, and support strategies when working with online texts. Therefore, all these findings lead to the same conclusion: metacognitive strategies facilitate better engagement in ESL tasks, provide L2 learners with the tools to manage their

own learning in either traditional or digital settings, and learners with higher levels of metacognitive awareness tend to demonstrate stronger comprehension abilities.

3. Research Methodology

This study aimed to examine the relationship between the use of metacognitive strategies namely planning, monitoring and evaluating, and ESL learners' language performance. It utilised a correlational research design, as suggested by Salkind (2017) where this approach investigates relationships between two or more variables without researcher intervention or manipulation of the variables.

The population for this study comprised 5883 students who enrolled in English courses across their academic programmes at one public university on the east coast of Malaysia. The Raosoft sample size calculator was used to determine the required sample size (Raosoft, 2004). Based on a 5% margin of error, a 95% confidence level, and a 50% response distribution, it was determined that the study requires a minimum of 361 students.

The source of data for this study was primary data, acquired through questionnaires. The questionnaire, which was adopted from Phakiti (2006), consisted of 35 questions and five sections. Responses were measured on a 5-point Likert scale, where 1=Never, 2=Sometimes, 3=Often, 4=Usually and 5=Always. To gain information about respondents' language performance, their SPM English results were requested as they represent a standardised national assessment of core language skills, i.e. reading, writing, grammar and vocabulary.

4. Research Findings

4.1 *Normality Test*

A normality test is employed to assess whether the dataset follows a normal distribution. In this study, skewness is used to quantify how asymmetrical a random variable's probability distribution is with respect to its mean. The skewness value may be undefined, positive, or negative. Pallant (2011) asserted that the data does not depart from normality when the measure of skewness is between -1.0 and 1.0. Since the measure for skewness was close to 0.0 and within the range between -1.0 and 1.0 as indicated in Table 1, the study concluded that the distribution of data was almost symmetrical or bell-shaped.

Table 1: Skewness Result

Skewness	-0.534

4.2 *Reliability Test*

The next step involves determining the reliability measure for the measuring items. Cronbach's alpha was calculated for each section to conduct the reliability analysis. The Cronbach alpha of 0.7 or higher indicates that the measuring items provide a reliable measure of internal consistency. As shown in Table 2, the values of Cronbach's alpha are 0.883, 0.910 and 0.879, respectively, for all the metacognitive strategies (planning, monitoring and evaluating). Thus, it is important to note that all reliability measures have exceeded the minimum value of 0.7 as recommended by Kline (1999).

Table 2: Cronbach's Alpha Values

Variables	Cronbach's Alpha	No. of Questions
Planning	0.883	6
Monitoring	0.910	6
Evaluating	0.879	5

4.3 *Descriptive Statistics*

The descriptive analysis of this study includes respondents' gender distribution, study programme and SPM English results. Table 3 displays the frequency and percentages for these demographic characteristics. Out of 361 total respondents, 75.3% (n=272) were female, and 24.7% (n=89) were male. The respondents were undergraduates from diploma (n=304) and bachelor's degree programmes (n=57). As for the respondents' SPM English results, most were high achievers (Grade A+ to B+), with B+ being the most common achievement (n=92).

Table 3: Demographic Characteristics

Demographic Characteristics		**Frequency**	**Percentage (%)**
Gender	Male	89	24.7
	Female	272	75.3
Study Programme	Diploma	304	84.2
	Bachelor's Degree	57	15.8
SPM English Results	A+	9	2.5
	A	85	23.5
	A-	56	15.5
	B+	92	25.5
	B	49	13.6
	C+	39	10.8
	C	20	5.5
	D	10	2.8
	E	1	0.3

4.4 *Correlation Statistics*

To determine the relationship between metacognitive strategies (planning, monitoring, evaluating) and respondents' ESL performance, Spearman's rank-order correlation test was performed. As illustrated in Table 4, all variables had significant negative relationships with respondents' SPM English results ($p < 0.05$). The r-values for planning, monitoring, and evaluating were -0.168, -0.255 and -0.265, respectively. Since SPM English results were coded in ascending order (1=A+,10=G), lower scores reflected better ESL performance. Thus, these negative correlations indicate that higher metacognitive strategies use was associated with improved SPM English achievement. This aligns with Abdullah's (2022) findings, which indicated that the advanced learners employed more metacognitive strategies while affective strategies were used less frequently. Shokrpour and Nasiri's (2011) observation also found that good readers outperformed the poor ones in the use of metacognitive strategies.

Despite being statistically significant, the weak negative correlations were produced. The planning strategy revealed a very weak correlation, while monitoring and evaluating showed weak correlations. This suggests that only a small portion of the variance in SPM English achievement affected the use of metacognitive strategies. This is pertinent as one empirical study examining metacognitive reading strategies and improved reading comprehension outcomes involving pre-service teachers also revealed a weak correlation, wherein the finding suggested that these advanced learners still did not translate this knowledge into practice despite possessing heightened awareness of metacognitive reading strategies (Razkane et al., 2025). In addition to this, Lin (2019) further noted that the correlation strength depends on various factors, such as gender differences, reading task types and also L1 literacy experience, not solely proficiency level.

Table 4: Spearman's Rank-Order Correlation Result

Variables	SPM English Result		Level
	Correlation	Significant	
Planning	-0.168	0.001	Very Weak
Monitoring	-0.255	0.001	Weak
Evaluating	-0.265	0.001	Weak

5. Conclusion

The current study found that there were significant relationships between metacognitive strategies (planning, monitoring, and evaluating) and SPM English results, with the r-values of -0.168, -0.255 and -0.265, respectively. This specifically indicates that greater use of metacognitive strategies is associated with enhanced English language performance. Thus, it underscores the contribution of these strategies to improved language performance (Kondal & Bairi, 2025; Momdjian & Chidiac, 2024). Nevertheless, the metacognitive strategies (planning, monitoring, and evaluating) showed only weak, though significant, associations with ESL learners' language performance which could possibly be due to context-dependent effects (i.e., learners' proficiency level, reading task types, cultural factors) as reported in earlier investigations (Saifuddin, 2018; Shih & Huang, 2018).

5.1 *Implications of the Study*

The findings offer critical insights into language instructors' roles in improving their pedagogical approaches, which aim to enhance ESL learners' reading comprehension and their overall learning outcomes. One approach that can be incorporated into ESL classrooms is the think-aloud protocol. This approach requires teachers to model how proficient readers monitor their comprehension in real time, and learners are subsequently asked to perform their own think-alouds in pairs or groups. Over time, they begin to internalise these metacognitive behaviours and monitor their comprehension independently. This indirectly allows ESL learners to nurture metacognitive awareness as they progress to become more conscious readers who plan, monitor, and evaluate their comprehension while reading.

5.2 *Limitations and Future Directions*

In this study, researchers relied on the use of a self-reported questionnaire to assess students' level of metacognitive strategies. This approach may introduce bias, due to the likelihood of the participants who may overestimate or underestimate their actual strategy use when engaging with reading tasks. Therefore, the reported use of metacognitive strategies were not able to reflect the participants actual learning behaviour in the context of authentic language learning. Additionally, the limited strength of the observed predictor also narrows the findings' scope. This suggests that metacognitive strategy use alone may not sufficiently explain variations in language performance among Malaysian ESL students. Other factors such as motivation, language exposure, instructional methods, or socio-economic background may play a more substantial role in shaping students' language outcomes.

Future research should administer reading performance tests to assess ESL learners' actual metacognitive strategies use. Performance data would validate whether self-reported use of the strategies accurately reflects their true reading comprehension abilities. Researchers should also systematically investigate moderator effects by incorporating moderating variables such as demographic groups or reading task types to better explain the weak relationships observed.

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