
Metacognitive Strategies and Reading Development in Islamic Higher Education

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Abstract: This study aims to examine the impact of metacognitive strategy instruction on the development of reading skills among undergraduate students at an Islamic higher education. The research focuses on how these strategies influence students' knowledge, skills, attitudes, and behaviors in reading academic texts. A qualitative descriptive design with a phenomenological approach was employed to explore students lived experiences. Eighteen fourth semester students who had completed a reading course incorporating metacognitive strategies were selected through purposive sampling. Data were collected through semi structured interviews and analyzed using thematic analysis to identify recurring patterns and themes. The findings reveal that metacognitive instruction significantly improved students' understanding of reading as an active and strategic process. Students demonstrated enhanced skills in monitoring comprehension, questioning, and drawing conclusions. In addition, they reported increased motivation, confidence, and classroom participation. The study concludes that integrating metacognitive strategies into reading instruction fosters self-regulated, reflective, and engaged learners. These results suggest that metacognitive instruction is effective in strengthening both cognitive and affective aspects of reading development in Islamic higher education contexts.

Keywords: Metacognition; reading; engagement; motivation; self-regulation.

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INTRODUCTION

Reading comprehension is a foundational academic skill that significantly affects learners' success across disciplines, particularly in English as a Foreign Language setting (Mihret & Joshi, 2025; Porter et al., 2024; Sohil et al., 2025). However, many university students, especially in non-English-speaking contexts like Indonesia, still struggle with interpreting texts critically and comprehensively due to limited exposure, vocabulary range, and strategic reading approaches (Ghorbani & Golparvar, 2020; X. Li et al., 2024; Vongsawath et al., 2026). Traditional reading instruction often focuses on decoding or literal comprehension, neglecting higher-order cognitive strategies that enable students to become active and reflective readers (Bozorgian & Shamsi, 2025; Dalman & Plonsky, 2025; J.-T. Li et al., 2024). This issue becomes more pronounced in Islamic university environments where the nature of texts studied often includes complex religious or

philosophical elements that require not only linguistic understanding but also cognitive and metacognitive engagement (Al-Fitroh, 2025; Rahayu & Iqbal, 2025).

These challenges call for pedagogical innovations that can promote deeper learning and independent comprehension processes. In response to these challenges, the implementation of metacognitive strategies has gained significant attention in recent literature (Bozorgian & Shamsi, 2025; Ishak et al., 2025; Kan et al., 2024; Şendağ et al., 2024). Metacognitive strategies—such as predicting, monitoring, clarifying, and evaluating—are known to facilitate learners' ability to control their own cognitive processes while reading, fostering better comprehension and retention (Zhang & Seepho, 2013; Teng, 2020). Numerous empirical studies have demonstrated that when learners are explicitly taught how to plan, monitor, and evaluate their reading through metacognitive training, they show marked improvement in understanding complex texts and engaging with them meaningfully (Mahdavi & Tensfeldt, 2018; Fahim & Rahimi, 2015).

Moreover, metacognitive instruction not only enhances reading comprehension but also supports the development of learner autonomy and critical thinking, which are essential skills in higher education (Lin, 2025; Song et al., 2025; Suharto et al., 2025; Xu et al., 2024). Despite its proven efficacy, research on metacognitive strategies remains largely quantitative and limited in scope, often focusing on test outcomes rather than students' holistic learning experiences. A further limitation in the existing literature is the underrepresentation of context-specific research—particularly studies that explore the implementation of metacognitive instruction in faith-based institutions such as Islamic universities. These institutions often combine secular and religious curriculum, creating a unique learning environment where critical literacy and reflective thinking are equally important (Anggraeni et al., 2024; Burriss & Leander, 2024; Le et al., 2024).

However, the influence of metacognitive strategies on students' reading development in such contexts remains insufficiently explored. More importantly, limited research examines learners' lived experiences and personal perceptions during metacognitive strategy instruction. There is a clear need to capture how students internalize and respond to these strategies cognitively and affectively, particularly through qualitative approaches that foreground learners' voices and reflections (Hashemian et al., 2024; Samimi & Moradgholi, 2025). Addressing this gap, the present study investigates the impact of metacognitive strategy implementation on students' reading development at an Islamic university in Indonesia. Guided by Badolo et al., (2025); Momdjian & Chidiac (2024) Impact theory—encompassing knowledge, skill, attitude, and behaviour—this study provides a comprehensive analysis of students' academic and personal learning transformations.

Using qualitative interviews with 18 EFL learners, this study captures not only students' understanding and skill acquisition but also their motivation, confidence, and classroom engagement. By focusing on learner centered narratives in a faith-integrated academic context, this research contributes a novel perspective to the field of reading pedagogy. The findings are expected to inform more inclusive and context-responsive approaches to reading instruction in tertiary education, particularly in Islamic academic environments where reflective learning is both an intellectual and spiritual imperative. Few studies have qualitatively examined the multifaceted effects of teaching metacognitive strategies on students' reading development in Islamic higher education contexts, despite the rising amount of research on the subject.

Current literature predominantly emphasizes measurable comprehension outcomes, while giving limited attention to students' cognitive, affective, and behavioural perceptions of metacognitive strategy instruction. Consequently, the central issue addressed in this study is how the teaching of metacognitive strategies influences the development of students' reading abilities at an Islamic university. Guided by Kwon's (2024) Impact Theory, this study seeks to explore four key dimensions: how metacognitive strategy instruction shapes students' attitudes and motivation toward reading; how it enhances their reading-related skills; how it deepens their understanding of reading as a strategic and reflective process; and how it influences their classroom learning behaviours. Through this comprehensive framework, the study aims to provide a holistic account of students' reading development.

METHOD

This study adopted a qualitative descriptive design with a phenomenological approach, aiming to explore the lived experiences of students in understanding reading texts through metacognitive strategies. This approach allows in-depth exploration of participants' subjective perceptions and experiences (Borg, 2024; Creswell & Poth, 2016; Regmi, 2024). A qualitative framework is ideal for capturing complex phenomena such as learning motivation and comprehension, which are not easily quantified but deeply felt by students (Lim, 2025; Usman et al., 2025). The study took place at IAIN Bone, Indonesia, specifically within the English Education department under the Faculty of Tarbiyah and Teacher Training. The site was purposively selected due to its emphasis on integrating Islamic values with 21st-century pedagogical practices, including the implementation of metacognitive strategies in the language curriculum.

According to Nahidin (2024); Rahayu & Iqbal (2025), Islamic higher education institutions in Indonesia have begun adopting innovative strategies to enhance students' engagement and reading literacy. The participants consisted of 18 fourth-semester undergraduate students in IAIN Bone, selected through purposive sampling. This method is frequently used in phenomenological research to ensure that participants possess direct and rich experience of the phenomenon under study Palinkas et al., (2025); Samuel & Merkebu (2025). Inclusion criteria included: (1) completion of a reading course incorporating metacognitive strategies, (2) regular attendance and active participation, and (3) voluntary consent to participate. The sample size was determined based on the principle of data saturation, which typically occurs within 12–20 participants in qualitative studies (Dang et al., 2024; Lau & Bratby, 2024).

Data were collected using semi-structured interviews to gain rich, in-depth insights into students' learning experiences. Interviews lasted between 20–30 minutes and were conducted in a private setting to maintain confidentiality. The interview questions were derived from the four domains of Kwon's theory. All interviews were audio-recorded, transcribed verbatim, and validated through member checking, a technique used to enhance credibility and trustworthiness (Ahmed, 2024; Ren, 2024). The data collection phase lasted for three weeks at the end of the academic semester. Data were analyzed using thematic analysis as described by Kushnir (2025), which is suitable for identifying, analyzing, and reporting patterns within qualitative data. The analysis was supported by NVivo 12 software to organize codes, themes, and memos efficiently. Coding followed both inductive and deductive approaches: themes were allowed to emerge naturally while also

being examined through the lens of the impact dimensions (knowledge, skill, attitude, behavior).

RESULT AND DISCUSSION

This section presents the thematic findings from in-depth interviews with 18 undergraduate students at an Islamic university in Indonesia, all of whom participated in a reading course that integrated metacognitive strategy instruction. Analysis of their responses yielded four major themes aligned with the constructs in Kwon's (2024) Impact Theory: knowledge, skill, attitude, and behavior.

Knowledge: Expanded Understanding of Reading as a Strategic Process

Prior to metacognitive instruction, many students perceived reading as a straightforward task of decoding texts or grasping superficial meanings. However, after the intervention, participants commonly reported a broadened and more strategic view of reading. Students expressed that they had gained clarity about what effective reading entails and developed a heightened awareness of their own cognitive processes during reading. Student 1 remarked, *"I think my skill was increased because before being taught using metacognitive strategies, it was very difficult for me to understand the reading materials."* Similarly, Student 2 stated, *"Before, I felt my understanding of reading skills was limited. Afterward, I became more capable of understanding the text deeply."* Students frequently used terms like "active thinking," "connecting information," and "drawing conclusions" to describe their current reading approach, suggesting that they had developed a sense of reading as an analytical and dynamic activity.

Student 8 articulated this shift vividly: *"I became more active in thinking, connecting information, and drawing my own conclusions. It felt like I was talking to the author."* Others emphasized the transition from passive reading to intentional strategy use. For example, Student 13 shared, *"Before, I struggled with understanding the texts. Now I understand the reading process and strategies like previewing and questioning."* Meanwhile, Student 15 added, *"The biggest change was I realized that reading was not just about understanding words, but also about monitoring my own understanding."* This reported change in knowledge not only reflects improved awareness of reading strategies but also a foundational shift in students' metacognitive beliefs about reading as a goal-directed, cognitively demanding process.

Skill: Strengthened Academic Engagement and Strategic Application

The second theme highlights how students transformed their metacognitive awareness into observable classroom behaviors, particularly in responding to lecturer prompts and academic tasks. Participants described finding it easier to articulate their ideas, demonstrating greater willingness to participate, and responding to questions through more structured and strategic reasoning. Several students emphasized increased confidence and readiness to engage in discussions. As Student 2 explained, *"I felt more prepared and confident to answer."* Similarly, Student 4 shared, *"I would share my thought process, explain my understanding, or ask clarifying questions based on the strategies I used."* Others expressed greater comfort when challenged. Student 6 reflected, *"I like if the lecturer asked me because it challenged me to think more,"* indicating positive engagement.

Student 7 added, *"I was very happy because if my lecturer asked about the lesson, it made me excited to answer it."* In addition to confidence, students also began to

demonstrate self-monitoring skills during classroom interactions. Student 11 shared, *“I actively use self-questioning and I think that it was enhancing my participation in class discussions.”* Student 12 reported, *“I tried to participate actively by sharing my predictions about the text. Sometimes I asked questions when I was not sure.”* Furthermore, a few participants reflected on how these metacognitive strategies enabled them to manage uncertainty. Student 9 said, *“If I was not sure, I would ask for clarification or explain what I found challenging.”* This indicates the beginning of self-regulated learning behaviors. Overall, students transitioned from passive learners to active participants capable of employing a repertoire of cognitive and metacognitive skills during reading-related tasks and class discussions.

Attitude: Positive Emotional Shifts and Motivation Toward Reading

The third major theme centers on changes in student motivation and affective responses toward reading. Across interviews, students conveyed that learning through metacognitive strategies positively impacted their enthusiasm, reduced anxiety, and increased interest in text comprehension. Many students directly attributed their heightened motivation to the newfound clarity and control over their reading processes. Student 1 mentioned, *“I felt more motivated because my ability to comprehend and analyse reading text was increased after being taught by using metacognitive strategy.”* Student 4 added, *“These strategies motivated me by making reading less overwhelming and helping me understand and analyse texts more confidently.”* Some students shared that reading had become enjoyable and even exciting. Student 3 reflected, *“Yes, I do. I did not know that learning reading can be this fun.”*

Similarly, Student 10 remarked, *“It motivated me to keep improving and apply the strategies in different types of reading texts.”* Participants also reported noticeable growth in their emotional self-regulation throughout the learning process. Student 14 shared, *“My confidence had improved,”* highlighting increased self-assurance during reading activities. Others expressed a sense of pride in their academic progress. For example, Student 16 stated, *“My motivation has increased because I can see my improvement in my reading abilities.”* In addition, Student 13 commented, *“Understanding these strategies had shown me things I should improve.”* These responses indicate a broader rise in intrinsic motivation, particularly in terms of autonomy, self-efficacy, and perceived competence, which are crucial elements for sustaining long-term academic achievement and continuous learning development.

Behavior: Greater Engagement and Active Participation in Learning

The behavioral dimension of the findings reflects tangible changes in how students engaged in the classroom after receiving metacognitive instruction. Students not only demonstrated enhanced strategic use of reading tools but also showed behavioral signs of active engagement, including asking questions, participating in activities, and expressing enjoyment during lessons. Most participants described a more stimulating learning environment. Student 1 said, *“I enjoyed attending the class because learning reading by using metacognitive strategy made me feel easier to comprehend the reading text.”* Student 2 added, *“Yes, I enjoyed attending classes more. It made me interested in attending classes.”* Others discussed the shift in classroom atmosphere. Student 4 remarked, *“I enjoyed classes more because metacognitive strategies made learning more interactive and engaging.”*

Student 5 confirmed, *“It was good in improving my reading skills and classroom participation.”*

Several students also highlighted the diversity of learning experiences during the instruction. Student 12 stated, *“The class was more engaging. I especially enjoyed the think-aloud activities where we shared what we think.”* Similarly, Student 8 shared, *“Absolutely! Class became more interesting and not monotonous.”* Participants further reported heightened enthusiasm for learning. Student 13 noted, *“I found myself looking forward to class because it was more interactive and I can see my progress,”* while Student 15 concluded, *“The class was more challenging, so I enjoyed it.”* These behavioral shifts demonstrate the tangible impact of metacognitive instruction on classroom engagement, revealing that cognitive strategy use is closely connected with affective and social dimensions of learning. Guided by Hwang et al., (2024) impact theory framework, this study confirms that metacognitive strategy instruction enhances reading comprehension, engagement, and student motivation.

The Influence of Metacognitive Strategies on Knowledge of Reading

This research was guided by Hwang et al., (2024) impact theory, which conceptualizes the outcomes of educational interventions across four dimensions: knowledge, skill, attitude, and behavior. This theoretical model is especially useful for assessing changes in both cognitive and affective domains within learning. It was used to develop interview protocols and interpret data, ensuring alignment between research objectives and analytical categories. The theory provides a structured lens to evaluate how learners internalize metacognitive strategies and transform them into meaningful academic behaviors. The first theme of the findings, which revealed an increased understanding of reading as a strategic process, aligns with research by Zhang & Seepho (2013) and Mekuria et al., (2024), who noted that metacognitive strategies promote deeper comprehension by encouraging learners to become aware of their cognitive processes during reading.

According to Zhang & Seepho (2013), readers who are trained to use strategies like previewing and questioning develop more profound understandings of texts and become more critical of the content they read. Similarly, Mekuria et al., (2024) emphasized that metacognitive awareness fosters self-regulation, enabling students to identify gaps in their comprehension and take corrective actions. The participants in this study reflected this development by recognizing their previous difficulties and applying strategies such as previewing and self-questioning to improve understanding. Additionally, students' comments about "monitoring understanding" and "drawing conclusions" mirror findings from Pahrizal et al., (2025), who reported that metacognitive instruction transforms passive reading into an active, problem-solving process and strengthens the ability to connect and synthesize ideas across texts.

Metacognitive Strategies and the Development of Reading Skills

The second theme, which underscores the enhancement of reading skills through increased participation and the ability to answer questions during classroom activities, reflects findings from several studies. Dulger & Ogan-Bekiroglu (2024) assert that metacognitive strategy use leads to improvements in reading comprehension, as it helps students develop the cognitive tools necessary to tackle complex texts. In line with these assertions, participants in this study reported feeling more confident in their ability to

respond to classroom prompts and engage in self-directed learning. This aligns with research by Ruiz de Zarobe & Smala (2020), who found that students who received metacognitive instruction demonstrated increased participation and a greater sense of self-efficacy in academic settings. Similarly, Paethrangsi et al., (2024); Yewang et al., (2025) discussed how metacognitive strategies promote greater independence in learners, enabling them to monitor and regulate their reading more effectively.

Furthermore, this study's finding that students began to engage in self-questioning and sought clarification when unsure supports the work of Ghosh (2024), who highlighted the role of metacognitive strategies in fostering an active learning environment. Ghosh (2024) argued that students who are equipped with the tools to assess their understanding are more likely to engage in meaningful discussions and problem-solving during class activities. The increased participation observed in this study reflects this active learning process, as students not only responded to lecturer prompts but also monitored their comprehension and reflected on their cognitive processes. This pattern of engagement enriched classroom interaction, strengthened collaborative dialogue, and demonstrated students' growing independence and responsibility in managing their own learning experiences.

Motivation and Attitudes Toward Reading

The third theme, which addresses changes in students' motivation and attitudes toward reading, is strongly supported by previous research. Affective responses to reading tasks, including increased motivation and reduced anxiety, are often associated with the use of metacognitive strategies. Studies conducted by Safa & Motaghi (2024) as well as Fathi & Shirazizadeh (2025) revealed that students who received metacognitive reading strategy instruction demonstrated higher intrinsic motivation and greater confidence in handling challenging texts. These findings are consistent with the results of the present study, where participants reported feeling more motivated and capable after the intervention. As Student 16 stated, "My motivation has increased because I can see my improvement in my reading abilities." Furthermore, Muche et al., (2024) emphasized that metacognitive tools foster improved academic performance and more positive attitudes toward learning.

This resonates with the attitudes reported by the participants in this study, who expressed greater enjoyment of reading and described their learning experience as "fun" and "engaging." In particular, Student 3's comment that "*learning reading can be this fun*" highlights how the incorporation of metacognitive strategies can transform what might otherwise be a daunting and stressful task into an enjoyable and self-satisfying activity. Many students indicated that they no longer perceived reading as a difficult obligation, but rather as a meaningful and manageable academic challenge. The use of structured strategies helped them feel more confident and in control of their comprehension process. As a result, reading became less intimidating, more interactive, and intellectually stimulating, fostering positive emotional engagement and sustained motivation in classroom learning.

Behavior: Increased Classroom Engagement

The final theme—enhanced engagement and participation in the classroom—emphasizes the role of metacognitive strategies in shaping students' behavioral responses. According to research by Janssen & Lazonder (2024) metacognitive strategies not only

improve cognitive outcomes but also lead to greater behavioral engagement. This study's participants described feeling more involved in the learning process, especially as the metacognitive strategies allowed them to take ownership of their learning. Their increased participation in discussions, as well as their ability to share thoughts and seek clarification, reflects the findings of Koulianou et al., (2025) who observed that metacognitive training fosters more proactive engagement in learning activities. In line with the work of Johnson et al., (2025) this study's participants were able to internalize metacognitive strategies and use them to navigate complex tasks.

As a result, they exhibited a higher level of behavioral involvement in the learning process. Students became more attentive, responsive, and willing to participate actively in discussions and reading activities. For instance, Student 8's reflection on the class being "not monotonous" and "more interesting" further confirms that metacognitive strategies contribute to the creation of an engaging and dynamic classroom environment. This transformation indicates that students were not merely completing tasks, but were genuinely invested in understanding and interacting with the material. The shift from a passive to an active role in learning has also been noted by Doyle et al. (2017), who argued that metacognitive strategies can significantly enhance the quality of classroom interactions, thereby increasing student engagement and collaborative learning experiences.

Theoretical and Practical Implications

The findings from this study support Kwon's (2024) impact theory by illustrating how metacognitive strategies contribute to students' knowledge, skills, attitudes, and behaviors. As Kwon (2024) suggests, the integration of metacognitive instruction leads to substantial cognitive, emotional, and behavioral shifts that enhance learning outcomes. This study contributes to the literature by demonstrating that these shifts occur even in diverse cultural and educational settings, such as at an Islamic university in Indonesia. Furthermore, the findings suggest practical implications for educators seeking to improve reading skills. Metacognitive strategies provide a practical toolkit for helping students become more active, strategic, and self-regulated learners. These strategies can be integrated into existing curriculum structures to foster greater participation and engagement in both reading and classroom activities.

CONCLUSION

This study concludes that the implementation of metacognitive strategy instruction plays a significant role in enhancing students' reading development in Islamic higher education. Through qualitative exploration, the findings demonstrate that students experienced meaningful growth in their understanding of reading as a strategic and reflective process. They developed stronger skills in monitoring comprehension, analyzing texts, and applying appropriate reading strategies. In addition to cognitive improvement, students showed positive changes in motivation, confidence, and classroom participation, indicating the integration of knowledge, skill, attitude, and behavior. The learning environment became more interactive and engaging, encouraging students to take greater responsibility for their own learning. Overall, metacognitive instruction supports the formation of self-regulated and active readers, and it is recommended as an essential component of reading curricula in Islamic university contexts.

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