

Liberal Journal of Language & Literature Review

Print ISSN: 3006-5887

Online ISSN: 3006-5895

<https://llrjournal.com/index.php/11>

**Examining the Role of Metacognitive Strategies in Academic
Reading: A Study of Pakistani ESL Undergraduates**



**Syeda Zain Zahra¹, Syeda Nayyab Zahra², Zumer
Rubab³**

MPhil Scholar, Department of English, Quaid-i-Azam
University Islamabad,

Email: zainsyeda57@gmail.com

MS Scholar, Department of English, COMSATS University,
Islamabad,

Email: nayyabzahra145@gmail.com

Lecturer, Department of English, Federal Urdu
University, Islamabad

Email: zumerrubab5@gmail.com

Abstract

Metacognitive strategies can play a vital role in enhancing the academic reading practices of undergraduate ESL students enrolled in BS English programs at public-sector universities in Karachi. This small-scale qualitative study aimed to explore how BS English students perceive the use of metacognitive strategies in academic reading. To fulfil this objective, the study employed qualitative content analysis for a more detailed understanding of the collected data. A set of 10 online Likert-scale questionnaire items was administered to 18 undergraduate students. In addition, five open-ended narrative inquiry questions were posed to three randomly selected participants from the same group to capture deeper insights. The analysis revealed two main themes: (1) Metacognitive strategies contributed to the development of more effective academic reading behaviors, and (2) These strategies supported students in achieving improved academic reading outcomes. The findings highlight that incorporating metacognitive strategies early in the academic reading process is essential for ESL learners, as it helps them evolve into more independent, reflective, and proficient readers of English academic texts.

Keywords: Metacognitive strategy, academic reading, students' perceptions

Introduction

One of the most important 21st-century learning abilities is reading, which calls for students to use critical thinking to progress with a wealth of information while also critically analyzing and interpreting the texts. According to Zaman, Chandio, and Noor (2025), in order to achieve greater reading learning rewards, students must continuously develop their analytical thinking abilities in order to become proficient readers. In today's ESL teaching-learning environment, exposing students to a broad range of L2 texts is also essential for helping them fully grasp the learning objectives of the target language and developing their reading abilities to the highest possible standards. Even with the availability of second language texts, the majority of ESL learners still face significant challenges when reading, such as difficulty

grasping the main ideas, unfamiliarity with new words, and incomplete comprehension of the entire contents forming in their texts. According to Ahmadi et al. (2013), the majority of ESL students consistently struggle with a variety of reading-related issues, such as failing to understand key concepts, having a limited vocabulary, and missing crucial information. ESL students in graduate programs at universities also face more complicated reading learning challenges. ESL students enrolled in graduate programs at universities must read a wide variety of academic materials in order to expand their knowledge of the subject-specific abilities. According to Nazhari et al. (2016), graduate program university ESL learners benefit from the existence of academic reading learning enterprises.

own more chances to broaden their viewpoint on the specific subjects they will be discussing in class settings. But this process is extremely difficult because graduate programs

In order to accurately grasp the most important material, university ESL students must have sufficient background knowledge in order to understand the academic writings they are intended to read.

Statement of Problem

According to Dodick et al. (2017), ESL learners will have many opportunities to accurately comprehend a variety of information that is presented in the texts with the help of prior knowledge since they will have developed a more robust reading comprehension of that information.

Despite the central role academic reading plays in undergraduate English programs, many ESL students in public-sector universities in Karachi struggle to comprehend complex academic texts effectively. This challenge is often due to a lack of awareness or application of metacognitive strategies, which are essential for monitoring, regulating, and enhancing reading comprehension. The absence of systematic instruction in these strategies results in poor

academic performance, reduced motivation, and surface-level engagement with academic content. Therefore, there is a pressing need to investigate how undergraduate ESL learners perceive and utilize metacognitive strategies in their academic reading practices.

Undergraduate ESL students pursuing BS English degrees at public-sector universities in Karachi frequently encounter difficulties in understanding academic reading materials. These challenges are compounded by limited exposure to metacognitive strategies that could help them read more critically and independently. While curriculum goals emphasize analytical and interpretive reading skills, students are often left without the tools to approach academic texts strategically. This gap highlights the need to examine students' perceptions of metacognitive strategies and the role such strategies play in enhancing their academic reading outcomes.

Research Objectives

The following are the objectives of this research study;

- To explore the perceptions of BS English undergraduate ESL students regarding the use of metacognitive strategies in academic reading.
- To examine how metacognitive strategies influence the reading comprehension and academic performance of ESL learners.
- To identify the specific metacognitive strategies commonly used by ESL students during their academic reading practices.

Research Questions

The following are the research questions of this research study;

1. What are the perceptions of BS English undergraduate ESL students about the role of metacognitive strategies in academic reading?
2. How do metacognitive strategies affect the academic reading comprehension and outcomes of ESL learners?
3. Which metacognitive strategies are most frequently employed by ESL students

while engaging in academic reading tasks?

Significance of the Study

This study is significant as it highlights the role of metacognitive strategies in improving academic reading skills among BS English undergraduate ESL students in Pakistan. By understanding students' perceptions and practices, the findings can inform English language instructors about effective strategy-based reading instruction. The study also provides valuable insights for curriculum designers and policymakers to integrate metacognitive strategy training.

Literature Revive

ESL educators have employed a diverse array of teaching-learning tactics to enhance students' reading skills. An excellent technique to achieve the aforementioned reading learning objective is the application of metacognitive strategies. Ahmadi et al. (2013) assert that with appropriate metacognitive strategy supervision, graduate university ESL learners are more likely to enhance their reading abilities, which then influences their continued growth of reading skills. This favorable reading learning outcome arose because graduate program university ESL learners may manage their cognitive processes by implementing more comprehensive planning, monitoring, and evaluation phases during the continuous reading learning process. Zhang and Seepho (2013) characterize metacognitive techniques as individuals' skills to organize, monitor, and assess their cognitive activities to effectively attain predetermined objectives prior to academic reading tasks. Consequently, it is widely asserted that proficient metacognitive L2 readers are likely to attain more gratifying reading results and accomplishments, as they concentrate on both cognitive and affective dimensions. Anjomshoaa et al. (2012) found that numerous university ESL learners significantly enhanced their reading comprehension skills and achieved more satisfying reading outcomes by utilizing effective metacognitive strategies during their reading processes.

Consequently, ESL educators are encouraged to assimilate metacognitive strategies at the onset of the L2 reading acquisition process. To effectively implement this learning technique, ESL teachers are strongly advised to engage their students' deep reading comprehension with knowledge they have not yet encountered, have previously encountered, and will encounter in the future. By engaging with these triadic metacognition frameworks, learners will enhance their ability to exert greater control over their reading processes, as they become acquainted with comprehensive planning, monitoring, and evaluation strategies that facilitate the holistic acquisition of critical information. Forrest Pressley and Waller (2013) assert that by assisting ESL learners in identifying their prior knowledge, gaps in understanding, and future learning objectives, they will engage in more meaningful reading experiences through the comprehensive implementation of reading planning, monitoring, and evaluation cycles.

Consequently, it is advisable for ESL educators to guide their students in employing a diverse array of metacognitive reading strategies, following thorough preparation, monitoring, and evaluation phases. This action should be undertaken to facilitate learners in comprehensively knowing their specific reading strengths and shortcomings. Upon recognizing their reading strengths and weaknesses, they will be better equipped to integrate diverse metacognitive reading strategies suited to their particular learning contexts, ultimately resulting in more fulfilling reading experiences. Baum et al. (2020) candidly assert that the effective identification of particular reading strengths and weaknesses will significantly enhance ESL learners' metacognitive reading strategies, as they will be aware of the most effective reading approaches for their learning processes. In the domain of academic reading for graduate program university ESL learners, metacognitive methods can significantly influence the dynamics of their reading learning process. The initial beneficial

effect is their evolution into more strategic and robust L2 readers, adept at effectively internalizing diverse reading techniques, since they may formulate their own ways to surmount specific reading challenges. The second beneficial aspect of metacognitive reading strategies is that graduate program university ESL learners exhibit heightened motivation to participate in diverse challenging reading activities due to their enhanced reading comprehension skills. This comprehensive reading comprehension framework resulted from their success in overcoming all reading obstacles, enabling them to progress to advanced reading proficiency levels. Ahmed (2020) asserts that the persistent application of metacognitive methods enhances the motivation of graduate program university ESL learners to concurrently address diverse reading challenges, leading to a marked improvement in their reading comprehension levels. The last advantage of integrating metacognitive methods is that graduate program university ESL learners may exhibit sustained proactive reading practices, fostered by the engaging reading environment created by this method.

Five previous pertinent research were conducted to thoroughly examine the evident benefits of metacognitive strategies for Pakistani ESL learners' reading acquisition efforts. Andriani and Mbato (2021) strongly urge ESL educators to offer more explicit assistance on metacognitive processes to enable learners to achieve more beneficial reading outcomes in future endeavors. Muhid et al. (2020) reveal that the majority of university ESL learners with sophisticated metacognitive methods excel in planning, monitoring, and assessing their reading activities compared to those without such strategies. Bria and Mbato (2019) reveal that a significant proportion of graduate program university ESL learners exhibit enhanced reading maturity and advanced cognitive skills following the implementation of effective metacognitive methods training. Dardjito (2019) strongly advocates for ESL educators to familiarize their

students with metacognitive skills at the beginning of reading instruction to transform them into more proficient, resilient, and structured L2 readers. In the recent study, Djudin (2017) emphatically encourages ESL educators to foster diverse second language learning initiatives that stimulate the ongoing application of metacognitive strategies, thereby cultivating more autonomous learners adept at formulating various problem-solving methods to address their specific learning challenges.

The researcher aims to critically analyze the importance of metacognitive methods in academic reading, based on the perspectives of BS English undergraduate ESL students at a public-sector university in Karachi. This small-scale qualitative study provides confidence that the findings may guide Pakistani ELT experts, educators, practitioners, and policy-makers in implementing metacognitive strategies as an advantageous pedagogical approach in varied reading classrooms. Therefore, it is crucial for all ELT stakeholders in this country to develop stronger collaborative networks to foster more favorable, meaningful, and transformative reading learning initiatives that incorporate metacognitive strategies to continually support ESL learners in becoming more independent, strategic, mature, and proficient L2 readers.

Research Methodology

Research Design

This study employed a small-scale qualitative research design, specifically utilizing qualitative content analysis to gain in-depth insights into BS English undergraduate ESL students' perceptions of metacognitive strategies in academic reading. Qualitative content analysis enables the researcher to interpret textual data systematically and meaningfully, allowing for a deeper understanding of the participants' lived experiences (Mayring, 2014).

Target Population

The target population for this study comprised BS English undergraduate ESL students enrolled in a public-sector university in Karachi, Pakistan.

Sampling Technique

A purposive sampling technique was used to select participants who had sufficient academic exposure to reading tasks and were likely to have engaged with metacognitive strategies in their coursework. From this sample, three students were randomly selected for further narrative inquiry.

Sample Size

The study involved a total of 18 participants from the BS English program. In addition, 3 students from the same group were randomly selected for follow-up open-ended narrative responses.

Data Collection Tools

Two tools were employed for data collection:

1. Likert-scale Questionnaire: A structured questionnaire consisting of 10 online Likert-scale items was distributed via Google Forms to gather general perceptions about the use of metacognitive strategies in academic reading.
2. Open-ended Narrative Inquiry: A follow-up set of 5 open-ended written narrative questions was sent via WhatsApp to 3 randomly selected students to collect more detailed and personal insights.

Data Analysis Technique

The responses from the Likert-scale questionnaire were categorized and visually presented in the form of bar charts to aid interpretation and comparison. Qualitative content analysis was then applied to both the questionnaire responses and narrative data to identify recurring themes, perceptions, and experiences. Select quotations from narrative responses and relevant literature were integrated to support and strengthen the interpretation of findings.

Results and Discussion

This section presents a detailed analysis of two primary themes derived from

the research participants. The themes resulting from the Likert-scale questionnaire categorization are robustly substantiated by chosen interview excerpts. Theories and previous discoveries. The two themes are (1) Positive academic reading behaviors fostered by metacognitive strategies and (2) Enhanced academic reading outcomes are progressively achieved. All comprehensive descriptions can be identified in the subsequent lines.

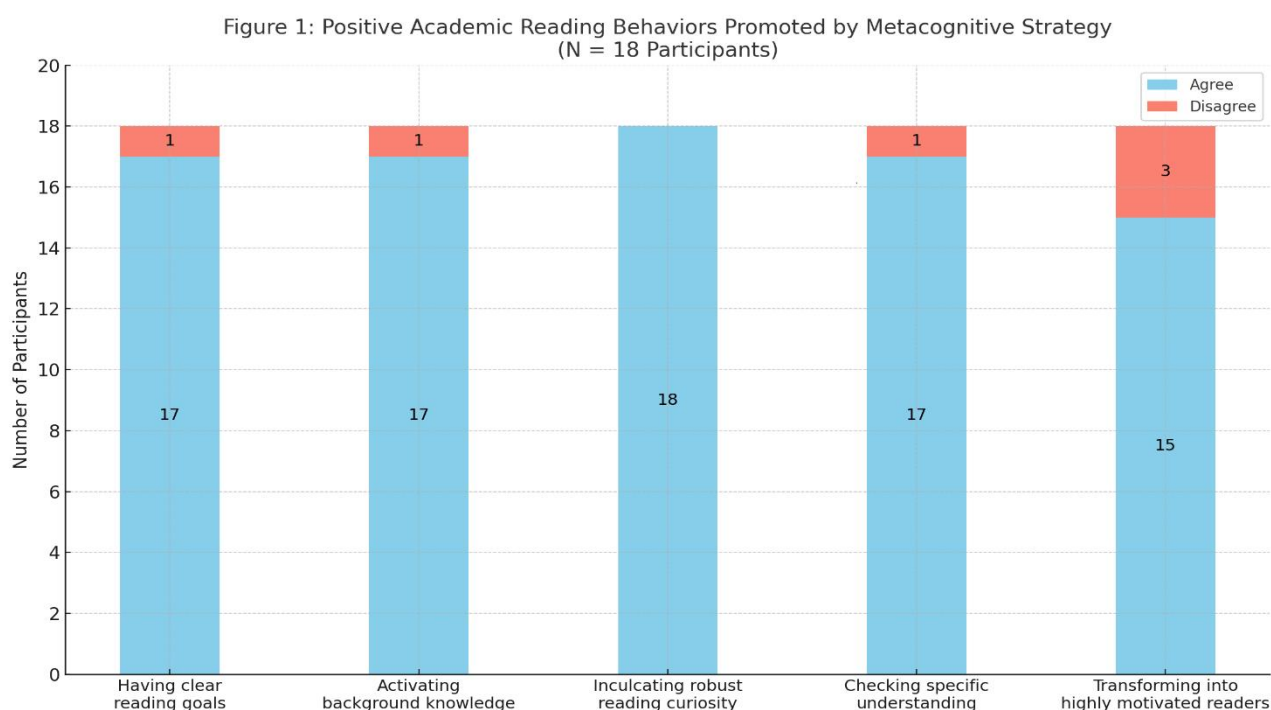


Figure 1: Positive Academic Reading Behaviour Promoted by Metacognitive Strategy (93% Participants Agree)

The data gathered from BS English ESL undergraduates in a public sector university in Karachi reveals that metacognitive strategies play a pivotal role in cultivating positive academic reading behaviors. A total of 17 out of 18 participants reported that they now establish clear reading objectives before beginning any academic reading task. This behavior indicates the development of self-regulated reading habits and aligns with the notion that goal-setting enhances reader focus and strategy application.

As one participant reflected: *"I usually employ metacognitive reading strategies*

in all academic reading activities." This suggests that metacognitive awareness is not occasional but systematically applied across reading experiences. Another student stated:

"Yes, I do. It's because by setting the objectives, I am directed and motivated to read with deep understanding and purpose." This response supports the idea that purposeful reading fosters motivation and engagement, leading to more meaningful interactions with texts. The third participant remarked: *"Of course, before going to read particular texts or readings, I commonly set the goals and plan what to do to achieve the desired outcomes."*

This indicates a structured, pre-reading planning stage that is essential for academic comprehension, particularly for ESL learners who face linguistic and contextual barriers.

In addition, 17 participants emphasized the importance of activating background knowledge prior to reading. This finding resonates with Muñoz and Valenzuela's (2020) assertion that prior knowledge significantly enhances reading comprehension. ESL learners who consciously connect their prior knowledge with new textual input are more likely to develop schema-driven understanding, aiding their academic reading performance.

Furthermore, all 18 participants unanimously reported that metacognitive strategies fostered greater curiosity in reading. This increased curiosity often results in students exploring texts more independently and with intrinsic motivation, which is crucial for developing lifelong academic reading habits.

With respect to monitoring comprehension, 17 participants reported employing self-checking methods such as summarizing, highlighting, and questioning during reading. These behaviors reflect a deep engagement with the text and indicate metacognitive regulation in action.

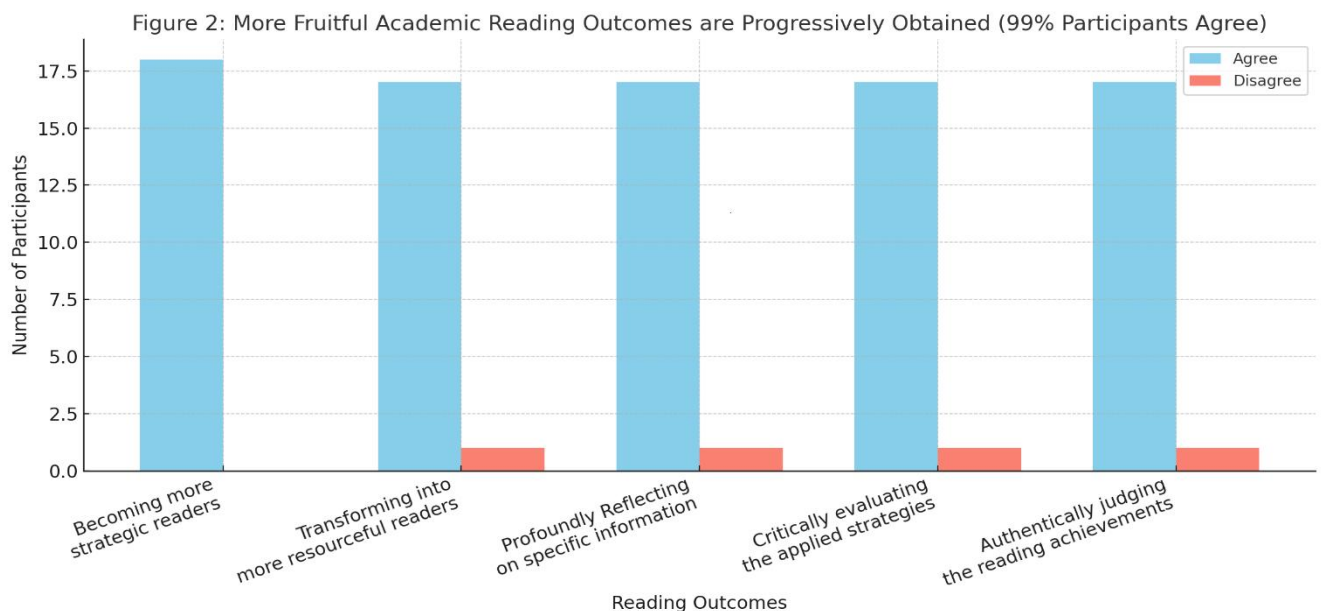
One student shared: *"To monitor my reading I make summaries or mind maps, give some highlights to important information because it really helps me to*

understand my reading."

This reflects the application of strategic reading behaviors, contributing to better information retention and comprehension. Another stated: *"I continuously monitor my exhaustive understanding of the targeted academic reading texts as long as my aim of exploring the text is fulfilled."* Such statements point to ongoing self-assessment during the reading process, an indicator of effective metacognitive functioning.

Lastly, 15 students noted a notable increase in reading motivation as a result of applying metacognitive strategies. This suggests that students who feel in control of their reading process are more likely to persist in reading complex academic texts. As motivation is a key factor in language acquisition, this outcome is particularly significant in an ESL context where learners often struggle with disengagement. A student commented: *"Yes, I commonly monitor my activities during reading in order to check my understanding of the particular readings and question myself whether I am on the right track to achieve the outcomes."* This demonstrates that metacognitive strategies also cultivate a reflective mindset, allowing learners to adjust strategies in real-time and enhance comprehension.

The findings from Figure 1 clearly illustrate that metacognitive strategies significantly enhance the academic reading behaviors of undergraduate ESL learners. The adoption of goal-setting, activation of background knowledge,



self-monitoring, and strategy evaluation contributes not only to improved comprehension but also fosters motivation and independent learning. These behaviours, supported by both quantitative and qualitative data, affirm the relevance of metacognitive strategy training in ESL academic reading instruction, particularly in the context of Pakistani public sector universities.

The data presented in Figure 2 reveal that impressive academic reading performances are intricately linked with the implementation of fruitful metacognitive reading strategies, which positively influence academic reading outcomes for ESL learners at the graduate level. The responses from both the questionnaire and the interviews support the conclusion that five metacognitive behaviors play a crucial role in enhancing learners' academic reading success.

All 18 participants unanimously agreed that developing as strategic readers is vital. This entails learners being able to internalize various academic reading strategies and apply them judiciously based on context, purpose, and task demands. Such flexibility fosters deeper comprehension and adaptive learning behavior. According to Dilek (2017), this strategic adaptability empowers students to hone their critical reading skills and make reading experiences more meaningful.

This notion is strongly supported by all three interviewees: *"I use a bit different strategies in my long reading to tell the whole information that I got from the reading."*

This highlights the participant's strategic flexibility, indicating awareness of modifying approaches based on reading type or purpose. *"Taking notes is also a good strategy to find out the gaps to be filled and criticize the text to be questioned and clarified."*

This reflects a metacognitive approach, involving planning and monitoring comprehension through note-taking and critical questioning. *"If my previous reading strategies are not effective enough to help me achieve the reading comprehension and desired reading outcomes, I need to change or modify the strategies so that I can find the most effective strategies in reading."* This shows metacognitive self-regulation, as the learner is consciously evaluating and adjusting strategies to optimize outcomes.

The majority of participants (17 out of 18) believed that being resourceful is essential. This refers to leveraging a variety of learning aids, including dictionaries, research articles, and academic support texts, to enrich their understanding. Meniado (2016) affirms the

importance of exposing learners to diverse academic resources and training them in their appropriate usage.

By fostering such resourcefulness, learners are empowered to independently address comprehension gaps and engage in self-directed academic reading practices.

Similarly, 17 out of 18 participants emphasized the need for post-reading self-reflection. Critical evaluation involves metacognitive monitoring where learners assess the effectiveness of strategies used during reading. As Razi and Çubukçu (2014) argue, metacognitive readers are adept at planning, monitoring, and evaluating their reading actions, which leads to improved academic performance and autonomy.

The interview responses further elucidate this finding: *"I always evaluate my applied reading strategies to improve my specific understanding of the topics."* This suggests the learner uses evaluation not only as a tool for improvement but as a means to deepen topic comprehension. *"I often evaluate my reading progress and strategies in order to be a better reader."*

Here, regular self-monitoring and performance review contribute to the learner's growth as an effective reader. *"Evaluating strategies helps me to confirm whether or not my understanding of the readings is correct."* The learner demonstrates an awareness of strategy accuracy and comprehension validation, which reflects high-level metacognitive functioning.

Again, 17 participants agreed that reflecting deeply on specific information from academic texts is crucial. This behavior indicates that students are not passively reading but actively engaging in thoughtful synthesis of ideas, which enhances retention and critical understanding. Ceylan (2015) supports this by emphasizing the necessity of raising learners' awareness regarding strategic reading benefits in academic environments.

Lastly, 17 participants agreed that authentic self-assessment of reading achievements serves as a motivational mechanism. This metacognitive evaluation reinforces confidence, encourages goal setting, and boosts higher-order thinking. According to Conrady (2015), this process nurtures skills like problem-solving, decision-making, and planning.

The overwhelmingly positive response (99%) in support of these five metacognitive behaviors underlines their effectiveness in enhancing academic reading outcomes. The integration of quantitative results with qualitative interview excerpts confirms that ESL learners benefit greatly from being strategic, resourceful, reflective, evaluative, and self-

aware readers. These findings strongly advocate for the explicit teaching and reinforcement of metacognitive strategies in academic reading classrooms, especially for BS English students in Pakistani public universities.

Conclusion

To sum up, the consistent use of metacognitive strategies can significantly enhance academic reading performance—cognitively, affectively, and psychologically—among ESL learners. Highly metacognitive readers are those who understand which strategies work best for them, enabling them to overcome various reading challenges. These readers are capable of managing their academic reading tasks more effectively through continuous planning, monitoring, and evaluation.

Therefore, English language instructors, particularly in the context of undergraduate ESL programs in Pakistan, are strongly encouraged to integrate metacognitive strategy training at the early stages of academic reading development. Doing so can help cultivate more autonomous, confident, proficient, and mature second language (L2) readers.

This small-scale qualitative study, however, acknowledges two main limitations. First, the focus was limited to a small group of BS English undergraduate students from one Public Sector University in Karachi. Future research should broaden this scope to include students from multiple institutions to produce more generalizable findings. Second, as the data was collected over a short period, future researchers are encouraged to conduct longitudinal studies to better understand the long-term impact of metacognitive strategies on academic reading in ESL contexts.

Despite these limitations, the findings of this study offer valuable insights for ESL educators, curriculum designers, and policymakers. The integration of metacognitive strategies into reading instruction can be a powerful tool in transforming undergraduate ESL learners into more reflective, strategic, and competent academic readers across diverse academic contexts.

References

Al Nazhari, H., Delfi, S., & K, S. (2016). A study on English reading habits of students of English Study Program of Riau University. *Jurnal Online Mahasiswa Fakultas Keguruan Dan Ilmu Pendidikan Universitas Riau*, 3(2), 1–8.
<https://jom.unri.ac.id/index.php/JOMFKIP/article/view/10027>

Andriani, E., & Mbato, C. L. (2021). Male and female Indonesian EFL undergraduate program students' metacognitive strategies in academic reading: Planning, monitoring and evaluation strategies. *Journal on English as a Foreign Language*, 11(2), 275–296. <https://doi.org/10.23971/jefl.v11i2.3006>

Anjomshoaa, L., Golestan, S., & Anjomshoaa, A. (2012). The influences of metacognitive awareness on reading comprehension in Iranian English undergraduate program students in Kerman, Iran. *International Journal of Applied Linguistics and English Literature*, 1(6), 193–198. <https://doi.org/10.7575/ijalel.v.1n.6p.193>

Baum, J., Frömer, R., & Rahman, R. A. (n.d.). Emotions and cognitive effort – but not source credibility – determine news-based social judgments. *Preprint*, 1–25.

Bria, M. G., & Mbato, C. L. (2019). Metacognitive strategies of undergraduate program and postgraduate program students in reading. *LLT Journal: A Journal on Language and Language Teaching*, 22(2), 182–197.

Clandinin, D. J., & Caine, V. (2013). Narrative inquiry. In *Reviewing qualitative research in the social sciences* (pp. 166–179). <https://doi.org/10.4324/9780203813324-13>

Conrady, K. (2015). Modeling metacognition: Making thinking visible in a content course for teachers. *Journal of Research in Mathematics Education*, 4(2), 132. <https://doi.org/10.17583/redimat.2015.1422>

Dardjito, H. (2019). Students' metacognitive reading awareness and academic English reading comprehension in EFL context. *International Journal of Instruction*, 12(4), 611–624. <https://doi.org/10.29333/iji.2019.12439a>

Dilek, C. (2017). An overview of metacognitive strategies in reading comprehension skill. *The Journal of Academic Social Science Studies*, 57, 1–17. <http://www.dipp.nrw.de/lizenzen/dppl/service/dppl/>

Djudin, T. (2017). Using metacognitive strategies to improve reading comprehension and solve a word problem. *JETL (Journal of Education, Teaching*

Liberal Journal of Language & Literature Review

Print ISSN: 3006-5887

Online ISSN: 3006-5895

and Learning), 2(1), 124. <https://doi.org/10.26737/jetl.v2i1.151>

Dodick, D., Starling, A. J., Wethe, J., Pang, Y., Messner, L. V., Smith, C., ... & Leong, D. (2017). The effect of in-school saccadic training on reading fluency and comprehension in first and second grade students: A randomized controlled trial. *Journal of Child Neurology*, 32(1), 104–111. <https://doi.org/10.1177/0883073816668704>

Eda Ceylan, L. H. (2015). Metacognition in reading comprehension. *Acuity: Journal of English Language Pedagogy, Literature, and Culture*, 7(2), 28–36. <https://jurnal.unai.edu/index.php/acuity>

Floris, F. D., & Divina, M. (2015). A study on the reading skills of EFL university students. *TEFLIN Journal*, 20(1), 37. <https://doi.org/10.15639/teflinjournal.v20i1/37-47>

Forrest-Pressley, D. L., & Waller, T. G. (2013). *Cognition, metacognition, and reading* (Vol. 18). Springer.

Mayring, P. (2014). *Qualitative content analysis: Theoretical foundation, basic procedures and software solution*. <https://www.ssoar.info/>

Meniado, J. C. (2016). Metacognitive reading strategies, motivation, and reading comprehension performance of Saudi EFL students. *English Language Teaching*, 9(3), 117. <https://doi.org/10.5539/elt.v9n3p117>

Muhid, A., Amalia, E. R., Hilaliyah, H., Budiana, N., & Wajdi, M. B. N. (2020). The effect of metacognitive strategies implementation on students' reading comprehension achievement. *International Journal of Instruction*, 13(2), 847–862. <https://doi.org/10.29333/iji.2020.13257a>

Muñoz, C., & Valenzuela, J. (2020). Demotivation in academic reading during teacher training. *Journal of Research in Reading*, 43(1), 41–56. <https://doi.org/10.1111/1467-9817.12288>

Mustajab Ahmed, R. (2020). Investigating EFL learners' awareness of cognitive and metacognitive reading strategies of students in different disciplines. *Arab*

World English Journal, 11(3), 294–304.

<https://doi.org/10.24093/awej/vol11no3.18>

Othman, Y., Mahamud, Z., & Jaidi, N. (2014). The effects of metacognitive strategy in reading expository text. *International Education Studies*, 7(13), 102–111.

Razi, S., & Çubukçu, F. (2014). Metacognition and reading: Investigating intervention and comprehension of EFL freshmen in Turkey. *Procedia - Social and Behavioral Sciences*, 158, 288–295.

<https://doi.org/10.1016/j.sbspro.2014.12.090>

Reza Ahmadi, M., Nizam Ismail, H., & Kamarul Kabilan Abdullah, M. (2013). The importance of metacognitive reading strategy awareness in reading comprehension. *English Language Teaching*, 6(10), 235–244.

<https://doi.org/10.5539/elt.v6n10p235>

Schwartz, B. L., & Díaz, F. (2014). Quantifying human metacognition for the neurosciences. In *The cognitive neuroscience of metacognition* (pp. 9–23). Springer. https://doi.org/10.1007/978-3-642-45190-4_2

Thuy, N. T. T. (2020). Metacognitive awareness of using reading strategies by TESOL postgraduate programs intakes 11 and 12 at Ho Chi Minh City Open University. *Theory and Practice in Language Studies*, 10(2), 157–167.

Zaman, M., Chandio, A. A., & Noor, H. (2025). Evaluating the influence of Meta-AI on enhancing English reading comprehension proficiency: An experimental study within a social media application framework. *Social Science Review Archives*, 3(1), 2223–2233. <https://doi.org/10.70670/sra.v3i1.533>

Zhang, L., & Seepho, S. (2013). Metacognitive strategy use and academic reading achievement: Insights from a Chinese context. *Electronic Journal of Foreign Language Teaching*, 10(1), 54–69.

Liberal Journal of Language & Literature Review

Print ISSN: 3006-5887

Online ISSN: 3006-5895