

Challenges and Strategies in Navigating the TOEFL Reading Section Among Selected Indonesian EFL Learners

Nursalim Nursalim^{1*}, Ali Ajam², Awaludin Rizal², Fergina Lengkoan³, Jehn N. C. Budiman⁴

¹ Universitas Pendidikan Muhammadiyah Sorong, Sorong, Indonesia

² Universitas Khairun, Ternate, Indonesia

³ Universitas Negeri Manado, Tondano, Indonesia

⁴ Politeknik Pelayaran Sulawesi Utara, Minahasa Selatan, Indonesia

*adenursalim@gmail.com

ARTICLE HISTORY

Received : 2024-07-07

Revised : 2025-03-07

Accepted : 2025-03-26

KEYWORDS

TOEFL

Reading strategies

EFL learners

Test-taking strategies

Standardized English tests

Language assessment



ABSTRACT

In an era where English proficiency dictates global academic and professional mobility, mastering the TOEFL Reading section remains a significant hurdle for many Indonesian EFL learners. Despite familiarity with widely endorsed strategies such as skimming, scanning, and vocabulary enhancement, consistent application under exam pressure remains elusive. This study addresses a critical gap in existing research by investigating not only the types of challenges faced by TOEFL takers but also the cognitive and strategic dissonances that hinder their performance. Employing a mixed-methods approach, the study collected quantitative data from the reading scores of 15 test-takers at an English Language Center in Tondano, North Sulawesi, and complemented it with qualitative insights from semi-structured interviews. The findings reveal persistent difficulties in time management, complex vocabulary processing, and inference-based questions, despite students' awareness of effective strategies. Notably, the study uncovers that the mere knowledge of techniques is insufficient without strategic internalization, adaptive focus, and real-time cognitive flexibility. Students identified vocabulary expansion, active reading, and timed practice as the most impactful strategies, yet gaps between awareness and execution remain. The study's contribution lies in offering a nuanced understanding of these strategic breakdowns and advocating for targeted pedagogical interventions, including strategy-focused curricula and individualized practice modules. These findings hold wider implications for TOEFL preparation programs, suggesting the need for personalized, cognition-aware teaching models that not only transmit strategies but also cultivate their consistent application in high-stakes contexts.

1. Introduction

In today's highly interconnected and knowledge-oriented society, English language proficiency has become a fundamental necessity for academic success, professional advancement, and global participation. Among various standardized assessments, the Test of English as a Foreign Language (TOEFL) serves as a significant benchmark for evaluating the academic English skills of non-native speakers. In Indonesia, where access to international education and scholarship opportunities increasingly depends on TOEFL performance, students' results on this test play a crucial role in shaping their futures (Lengkoan et al., 2022). However, despite extensive preparation, many Indonesian learners continue to face considerable challenges, especially in the Reading section, which demands both linguistic proficiency and cognitive agility within strict time limits.

Although often regarded as less intimidating than the Listening or Speaking sections, the Reading component presents its own complex cognitive and linguistic demands. Test-takers must interpret academic texts, analyze rhetorical structures, and answer inferential questions under tight time constraints, requiring the integration of comprehension, analysis, and time management (Alavi & Bordbar, 2012). While strategies such as skimming, scanning, and contextual guessing are commonly introduced in preparation, learners frequently fail to apply them effectively under real test conditions due to pressure and cognitive overload (Simanjuntak, 2018). This discrepancy between strategy awareness and actual performance highlights the need to examine learners' cognitive processes and real experiences, especially in the Indonesian EFL context where metacognitive strategies like using context clues play a critical role in reading comprehension (Sungatullina et al., 2016).

Several studies focusing on Indonesian learners reveal a variety of strategies for addressing reading difficulties, such as identifying main ideas and interpreting unfamiliar words. However, the consistent use of these strategies remains limited (Septiana et al., 2021; Zalha et al., 2020). emphasizes the importance of thorough preparation in enhancing reading comprehension, whereas Fitria (2024) points out that insufficient preparation worsens students' struggles. Even when students are familiar with strategies, high-pressure test environments continue to disrupt their performance. This indicates a need for deeper analysis of how cognitive strategies operate under actual test conditions and how instruction can better support learners in such scenarios (Hafid et al., 2021; Sudrajat & Astuti, 2018).

Existing research has identified vocabulary difficulties, time constraints, and text complexity as major barriers to TOEFL Reading success. Yigzaw and Chanie (2024) highlight how vocabulary limitations and overreliance on bottom-up processing hinder reading speed and comprehension. Similarly, Hsu (2025) notes the cognitive demands of inference-making and decoding rhetorical cues. Mekuria et al. (2024) observe that many learners do not apply top-down strategies effectively, resulting in inefficient reading behaviors. Despite these findings, Romadhon (2024) argues that most studies focus broadly on comprehension barriers without pinpointing specific strategic breakdowns during the test. This reveals a gap in understanding how students internalize and apply reading strategies under high-stakes conditions.

While strategic instruction is often presented as a solution, recent studies question the depth of its impact. Leba et al. (2024) and Fitria (2024a) observe that many students lack metacognitive flexibility, making it difficult for them to adjust strategies according to the complexity of the reading task. Busa and Chung (2024) emphasize that instructional approaches lacking student engagement are unlikely to result in meaningful strategy use during testing. Additionally, although vocabulary development is widely acknowledged as essential (Riswanto et al., 2019; Delfi & Yamat, 2017), the relationship between vocabulary knowledge and real-time decision-making remains insufficiently explored. Irawan and Ahmad (2024) and Xiong (2024) argue that mere exposure to strategies is not enough if learners are not taught how to manage cognitive load and individual differences. Despite frequent attention to these issues, little research has explained why learners continue to underperform in the Reading section despite knowing which strategies to use.

In response to this gap, the present study investigates the experiences of Indonesian EFL learners who, despite understanding various reading strategies, still struggle to implement them effectively during the TOEFL test. This research moves beyond general observations by closely examining the internal

barriers, cognitive inconsistencies, and moments of strategic failure that characterize test-takers' interaction with the Reading section. By integrating insights from cognitive linguistics and applied pedagogy, the study explores not only the strategies learners intend to use but also the behavioral patterns that emerge during test execution. This approach offers a new perspective by linking strategy awareness to practical application through a detailed examination of learners' experiences.

This study provides both theoretical and practical insights by exploring the underlying causes of Indonesian EFL learners' inconsistent use of reading strategies and the role of emotional, cognitive, and contextual factors in their TOEFL Reading performance. Employing a mixed-methods approach that integrates quantitative score analysis with learner narratives, it identifies common challenges and adaptive behaviors. Central to the inquiry is the question: *Why do Indonesian EFL learners continue to struggle with the TOEFL Reading section despite being familiar with effective strategies?* In response, the study promotes personalized, integrated training models that address individual learner profiles, emotional conditions, and cognitive processing styles. The findings have significant implications for educators, curriculum developers, and TOEFL instructors, calling for adaptive instructional frameworks that translate theoretical knowledge into effective test-taking skills. Ultimately, the study supports greater educational equity and expanded academic opportunities in Indonesia by equipping learners to overcome persistent obstacles in high-stakes reading assessments

2. Literature Review

2.1 TOEFL Reading section: Students' Struggles

The TOEFL Reading section poses intricate challenges that require a strong grasp of language skills and cognitive flexibility. As highlighted by Hsu (2025), this section evaluates students' abilities to comprehend academic discourse, infer implicit meanings, and recognize rhetorical structures. Despite its standardized format, many Indonesian EFL learners struggle with lexical complexity, unfamiliar topics, and ineffective reading strategies (Yigzaw and Chanie, 2024). A significant issue lies in learners' tendency to rely on surface-level decoding rather than engaging in higher-order reading techniques such as skimming, scanning, and predicting (Mekuria et al., 2024). This overdependence on bottom-up processing often results in slower reading speeds and difficulty in pinpointing main ideas, particularly within the constrained time limits of the test.

Although many studies have highlighted general challenges in reading comprehension, few have offered a structured analysis of specific cognitive

breakdowns during reading tasks, especially in standardized tests like the TOEFL. While Cognitive Load Theory (CLT) has gained recognition across educational domains, its targeted application to reading comprehension remains limited. Sweller's work emphasizes that working memory is finite, and learning suffers when cognitive overload arises from intrinsic, extraneous, or germane loads (Fraser et al., 2012; Young et al., 2014; Sweller, 2010). Analyzing these cognitive loads within TOEFL reading tasks enables a deeper understanding of learner performance. Intrinsic load stems from the inherent difficulty of the material, influenced by a reader's familiarity and proficiency (Sewell et al., 2019; Naismith et al., 2015); extraneous load arises from distractions or poor instructional design (Young et al., 2014; Sewell et al., 2018); and germane load involves the mental effort invested in building and refining knowledge structures (Haghani et al., 2020; Sweller, 2010).

These interactions can illuminate specific comprehension challenges, such as when difficult vocabulary or syntax elevates intrinsic load and impedes schema development (Cerdán et al., 2018; Wang et al., 2022). Addressing these issues through CLT may inform strategies that simplify linguistic complexity, tailor materials to proficiency levels, and reduce extraneous distractions (Leppink & Duvivier, 2016; Zhang et al., 2024). Emerging evidence suggests that balancing these loads enhances meaningful processing and academic outcomes (Galy et al., 2012), reinforcing the value of a structured cognitive load framework in designing instruction that accommodates learner variability.

2.2 Strategic Deficiencies and Pedagogical Interventions

Proficient reading in TOEFL contexts depends heavily on the use of metacognitive strategies. Research by Leba et al. (2024) and Fitria (2024a) shows that effective readers commonly apply summarization, contextual inference, and structural mapping to navigate complex texts. Nevertheless, as Romadhon (2024) and Irawan and Ahmad (2024) argue, many EFL learners show limited flexibility in their strategic behavior. This lack of adaptability becomes particularly problematic when dealing with challenging question types such as paraphrasing and inference-based tasks (Fitria, 2024a).

Instructional practices often emphasize the introduction of strategies without ensuring learners are equipped to adjust and internalize them based on task demands. Busa and Chung (2024) point out that teacher-centered approaches lacking student engagement are unlikely to instill lasting strategy use. Similarly, while vocabulary development is widely acknowledged as foundational (Riswanto et al., 2019; Delfi and Yamat, 2017), its integration with real-time comprehension and decision-making is rarely

addressed in depth. Scholars such as Xiong (2024) and Irawan and Ahmad (2024) suggest that mere exposure to strategies does not guarantee effective use unless students are also taught to manage cognitive overload and account for individual differences.

Another dimension that remains underexplored is the role of digital and adaptive learning tools in supporting strategy development. Although TOEFL instruction has evolved, few studies have investigated how artificial intelligence or adaptive platforms can personalize reading instruction and provide timely feedback. The potential of technology to support learner-specific needs and reduce cognitive strain presents a promising area for future inquiry.

2.3 Novelty and Research Implications

While earlier research has identified key challenges faced by learners, such as limited vocabulary and test anxiety, this study offers a more nuanced perspective by highlighting the gap between learners' knowledge and their ability to apply it effectively under TOEFL test conditions. Focusing on the real-time experiences of Indonesian EFL learners, the study reveals how cognitive inconsistencies and emotional responses disrupt performance, moving beyond the mechanical mastery of test-taking strategies typically emphasized in preparation programs (Sudrajat & Astuti, 2018; Simanjuntak, 2018). Rather than relying solely on observable outcomes or retrospective reflections, this research integrates cognitive linguistics and applied pedagogy to examine the internal processes that hinder strategic application during high-stakes exams (Zhou & Wei, 2018). For example, Cho and Blood (2020) emphasize the role of personal factors in score variability, while Llosa and Malone (2018) show that cognitive execution, rather than skill mastery alone, significantly impacts writing performance under pressure. These findings underscore a critical gap in the literature regarding the conditions under which awareness of strategies does not translate into successful outcomes, supporting Zhang's (2024) call for pedagogical frameworks aligned with learners' cognitive processes.

Theoretically, this study contributes to understanding how reading strategies interact with cognitive, emotional, and contextual factors to shape behavioral outcomes (Qian et al., 2021). The findings indicate a clear need for adaptive teaching models that address learners' cognitive profiles. Through context-aware instruction, diagnostic assessment, and individualized feedback, instructors and curriculum designers can promote deeper comprehension and more sustained improvements in test performance (Wahyuni et al., 2022; Rizky et al., 2023). This approach transcends conventional training by advocating a more comprehensive understanding of how cognition, emotional states, and context jointly affect success in high-pressure test environments. .

3. Method

This study employed a mixed-method approach to examine the challenges faced by TOEFL takers in reading and the strategies that support improved performance. By integrating quantitative and qualitative methods within a single framework, it aligned philosophical assumptions with methodological practices to provide a comprehensive view of the research problem. Statistical analysis identified score trends, while qualitative interviews revealed participants' experiences, difficulties, and applied strategies. This integration offered a deeper understanding of the reading outcomes.

3.1 Research Design

The research design combined score analysis with interview-based exploration to address both the measurable and experiential dimensions of TOEFL Reading performance. The participants included fifteen TOEFL test takers enrolled at the English Language Center in Tondano, North Sulawesi. Their reading scores ranged from 30 to 52, thereby representing a diverse range of reading proficiencies. This sample size was appropriate for the goals of the study, providing adequate variation to explore distinct challenges and strategies while remaining manageable for thorough analysis. The quantitative data from the participants' most recent test performances allowed for the detection of score patterns, while the qualitative interviews contributed rich, contextual insights into individual learning processes and strategy use. The combination of breadth in score data and depth in narrative accounts made the design suitable for an exploratory study of this nature.

3.2 Data Collection Procedure

Quantitative Component: Participants' TOEFL Reading scores were collected from their five most recent tests. These scores served as the primary dataset for analyzing patterns of improvement or decline over time, offering a basic framework for understanding score trends and their variability.

Qualitative Component: Semi-structured interviews were conducted to explore participants' preparation experiences, obstacles encountered, and strategies employed when approaching the TOEFL Reading section. Each interview lasted between 30 and 45 minutes and was conducted either in a quiet room at the English Language Center or through an online platform depending on the availability and preference of each participant. The use of a semi-structured format allowed the researcher to maintain focus on key thematic issues while also encouraging participants to elaborate on personal insights and strategies.

3.2.1 Interview Protocol

- *Objective:* To uncover the personal experiences, recurring challenges, and strategic approaches

employed by TOEFL test takers when preparing for and taking the Reading section. The aim was to understand why difficulties remain prevalent despite the participants' awareness of established reading strategies.

- *Participants:* Fifteen TOEFL test takers from the English Language Center at Tondano, North Sulawesi.
- *Format:* Semi-structured interviews guided by open-ended questions and follow-up probes.
- *Setting:* Conducted either on-site in a quiet environment or via online conferencing tools, ensuring convenience and comfort for all participants.
- *Duration:* Each session lasted approximately 30 to 45 minutes.

3.2.2 Data Analysis Procedures

Quantitative Analysis: The quantitative data, comprised of TOEFL Reading scores, were analyzed to determine score patterns and changes over time. This involved comparing the sequence of five recent test results per participant to identify improvements, declines, or consistency in their reading performance.

Qualitative Analysis: Interview data were analyzed using thematic analysis. The researcher began by reading transcripts in full, followed by the coding of key phrases and expressions that reflected challenges such as time pressure and vocabulary gaps, as well as strategies like scanning and skimming. These codes were then grouped into broader thematic categories to construct a detailed understanding of students' preparation processes and test-taking behaviors.

Coding and Categorization: Thematic codes were derived inductively from the interview data and were systematically organized to identify recurring patterns in participant experiences. This process of categorization enabled the synthesis of rich, qualitative insights that complemented the quantitative findings, providing a more holistic interpretation of the data and enhancing the clarity of the study's conclusions.

4. Result

4.1 Challenges in Mastering TOEFL Reading

This section presents a comprehensive analysis of the key challenges faced by Indonesian EFL learners in their efforts to master the TOEFL Reading section. Drawing on both quantitative test data and qualitative interview responses, the analysis uncovers five primary areas of difficulty: time management, vocabulary limitations, text complexity, question-type sensitivity, and cognitive endurance. Each theme is supported by direct learner testimony and interpreted through the lens of cognitive, linguistic, and educational frameworks.

4.1.1 Time Management Difficulties

Time pressure was the most commonly reported challenge among participants. Although many test-takers expressed familiarity with reading strategies such as skimming and scanning, their ability to implement these techniques during the test was frequently compromised by the demands of pacing and limited duration. Of the fifteen participants, eleven indicated that they failed to complete all the questions within the allotted time, and three learners who scored 30 explicitly mentioned guessing answers due to time constraints.

“I know how to skim, but when I’m under pressure, I keep jumping between the question and the passage and then run out of time before finishing.”

(P-C1, Int-1.TM)

“It’s hard to read every line carefully. I always feel like I’m racing against the clock. When I slow down to understand, I lose too much time.”

(P-C3, Int-1.TM)

“Sometimes I realize I only have five minutes left and ten questions to go. That’s when I just choose any answer and move on.”

(P-C6, Int-1.TPR)

These responses reflect a gap between strategic knowledge and execution fluency. The students possessed theoretical understanding of effective reading strategies but lacked the executive control required to regulate them under time pressure. This situation aligns with findings in cognitive load theory, where excessive task complexity diminishes the learner’s capacity to coordinate multiple cognitive processes simultaneously. As a result, instruction must extend beyond introducing techniques and instead simulate test environments where learners can internalize pacing rhythms and develop adaptable timing strategies.

4.1.2 Vocabulary Constraints

Another recurring theme was the learners’ limited mastery of academic vocabulary, which negatively impacted their reading comprehension. While most participants acknowledged that vocabulary enhancement was part of their preparation, many struggled to understand low-frequency or contextually nuanced terms during the test. Among the participants who scored below 40, five indicated that unfamiliar vocabulary disrupted their reading flow and prevented them from answering questions confidently.

“Sometimes one unfamiliar word can throw off my understanding of the whole paragraph, especially if it’s in the question part.”

(P-C5, Int-1.TVD)

“Even if I know most of the words, there are always one or two in each passage that make me confused. It’s hard to guess their meaning quickly.”

(P-C13, Int-1.TLIC)

“I keep seeing words in the reading test that I never studied. It slows me down, and I have to reread everything.”

(P-C10, Int-1.,TVH)

These excerpts suggest that the learners’ lexical resources were insufficiently robust for the complexity of TOEFL reading passages. More importantly, they highlight a tendency to fixate on unknown words rather than leveraging contextual inference strategies. This behavior indicates a lack of training in ambiguity tolerance and strategic guessing, both of which are essential for fluent reading. To address this, instructors should emphasize deep lexical processing, integrate exposure to authentic academic texts, and provide learners with structured opportunities to practice deriving meaning from context under time constraints.

4.1.3 Text Complexity and Sentence Structure

Beyond vocabulary, participants also cited difficulty processing the **syntactic complexity** of TOEFL texts. Several test-takers reported having to reread long sentences multiple times due to unfamiliar grammatical constructions or dense rhetorical structure. These challenges were especially common among those scoring in the 30 to 42 range.

“I had to read the same paragraph two or three times. The sentences were just too long, and the meaning was hidden.”

(P-C13, Int-1.TTC)

“Some of the sentences have so many commas or extra clauses that I forget what the main point is by the end.”

(Participant C11, Interview 1, Theme: Structural Overload)

“I get confused when the sentence starts with a long phrase and then suddenly changes direction. It’s not like normal English.”

(P-C14, Int-1.TSD)

From a cognitive perspective, these comments reflect working memory limitations in syntactic parsing. When learners encounter long or embedded structures, they expend more cognitive effort trying to hold and integrate clauses, which increases the likelihood of comprehension breakdown. To mitigate this, instruction should include syntactic mapping exercises and scaffolded analysis of complex sentence types. Furthermore, learners would benefit from exposure to authentic academic discourse that gradually increases in syntactic difficulty, allowing them to develop greater resilience and flexibility.

4.1.4 Challenges with Question Types: Inference and Paraphrasing

Students reported particular difficulty with higher-order reading questions, especially those requiring inference and paraphrasing. These questions were consistently described as the most confusing and time-consuming. Among participants scoring above 45, only four reported confidence in their ability to answer inference questions accurately.

“I get confused with inference questions. I can’t always tell what the question is really asking unless I read the whole thing again.”
(P-C8, Int-1.TIC)

“Paraphrasing questions are tricky. The answers look so similar that I cannot see which one matches the passage exactly.”
(P-C2, Int-1.TSC)

“Sometimes I choose an answer that I think means the same, but then I check and realize I missed a small difference.”
(P-C12, Int-1.TPE)

These challenges arise from limited inferential reasoning and semantic flexibility. Unlike detail questions that rely on retrieving explicit information, inference items require drawing logical conclusions from implicit content, while paraphrasing questions demand an awareness of semantic equivalence and subtle shifts in meaning. Both types call for advanced metalinguistic awareness and reflective comprehension, which can be developed through targeted instruction such as inference drills with short texts, comparing paraphrased passages, and vocabulary substitution exercises to heighten sensitivity to meaning variations.

4.1.5 Focus and Mental Endurance

Cognitive stamina emerged as a final, yet critical, concern. While learners often performed well in the early stages of the test, their attention and mental energy declined significantly by the final passage. This pattern was most pronounced among those who scored inconsistently across multiple tests, often performing well on the first reading passage and poorly on the last.

“After the second passage, my brain gets tired. I lose focus and start guessing just to finish on time.”
(P-C15, Int-1.TFF)

“In the last ten minutes, I cannot concentrate anymore. I just read without understanding and hope I get some answers right.”
(P-C7, Int-1.TCB)

“The more I read, the harder it gets to stay focused. I think my mind just shuts down after a while.”
(P-C4, Int-1.TMD)

These responses point to cognitive depletion, where sustained attention over time diminishes due to effortful processing and emotional strain. This challenge is compounded in standardized tests that include multiple reading sections with no scheduled breaks. As a solution, TOEFL preparation must incorporate cognitive endurance training, including full-length practice tests and techniques for self-monitoring attention. Additionally, mindfulness strategies and brief recovery exercises between passages can improve learners’ ability to remain focused throughout the test.

In conclusion, the findings presented in this section highlight the complex and interrelated challenges that learners face in mastering the TOEFL Reading section. These challenges are not merely linguistic in nature but extend to cognitive management, emotional regulation, and strategic flexibility. Time management, vocabulary overload, syntactic complexity, question-type sensitivity, and diminished stamina collectively compromise performance, especially under high-pressure conditions.

Although learners are familiar with basic reading strategies, their inconsistent implementation reveals a critical gap between strategy awareness and strategic automatization. Effective reading in the TOEFL context demands more than a collection of techniques. It requires the internalization of these strategies through guided practice, reflective feedback, and repeated exposure to authentic test conditions. Moreover, the findings underscore the importance of addressing both cognitive processes and affective states, since anxiety and fatigue can be just as detrimental as lack of knowledge. To transform passive understanding into test-ready performance, TOEFL preparation programs must adopt a holistic instructional model. This model should integrate linguistic development, metacognitive training, psychological support, and endurance-building activities. By doing so, educators can better equip learners to confront the real-world complexity of standardized academic reading and promote equitable access to international academic opportunities.

4.2 Strategies for Overcoming Reading Difficulties

In response to the challenges encountered in the TOEFL Reading section, learners demonstrated a variety of adaptive strategies aimed at improving their performance. These strategies were derived from personal experimentation, instructor guidance, and informal learning sources such as YouTube or peer advice. Although their execution was not always consistent or optimal, the strategies identified reflect an emerging awareness among learners of the need to approach reading as a structured, goal-directed activity.

Both the qualitative interview data and the score patterns suggest that learners who actively practiced strategic behaviors tended to show more stable or improved performance in the 40–50 score range, while those who lacked strategy application were more likely to remain at the lower end of the scoring spectrum (30–35).

4.2.1 Skimming and Scanning Techniques

The most frequently cited strategies were skimming for main ideas and scanning for specific details. These approaches were described by over ten participants and were consistently associated with improved pacing and focus during the test.

“I usually start by skimming the text to get the main idea, then read the questions and scan for where the answer might be.”
(P-C9, Int-1.TSC)

“Skimming helps me understand what the passage is about, then I scan for specific words or phrases when answering questions.”
(P-C10, Int-1.TSS)

“If I read everything word by word, I will run out of time. So I skim each paragraph to get the topic, then only scan the passage when I answer the questions.”
(P-C5, Int-1.TSS)

Among participants who employed skimming and scanning routinely, 7 out of 9 recorded consistent reading scores above 45. This suggests that these strategies are effective when applied systematically and combined with familiarity with the test structure. However, the data also indicate that excessive reliance on these techniques without deeper reading led to frequent mistakes on inferential questions. For instance, participants who scored below 40 reported using skimming exclusively, skipping re-reading for context clarification. This implies that skimming and scanning are necessary but insufficient on their own and must be integrated into a broader reading approach.

4.2.2 Previewing Questions Before Reading

Previewing the questions before engaging with the passage was another popular tactic. Learners described this method as a way to reduce anxiety and focus their attention on relevant sections of the passage.

“Before I read the passage, I check the questions so I know what to look for. It saves time and keeps me focused.”
(P-C4, Int-1.TQP)

“Reading the questions first gives me direction. I don’t waste time reading everything, I just read what I need.”
(P-C7, Int-1.TQP)

Of the 11 participants who reported using this strategy, 8 had scores in the mid to high 40s. This correlation suggests that previewing can enhance strategic focus. Nevertheless, a few students who scored below 40 also used this method, but failed to supplement it with full passage engagement. As a result, they performed poorly on questions that required global comprehension, such as identifying the author’s purpose or summarizing the passage. These findings support the argument that while previewing is helpful, it should be part of a layered reading process that includes revisiting the full passage to ensure coherence and context alignment.

4.2.3 Vocabulary Development and Reinforcement

Building vocabulary was an area where learners invested significant time and effort. Techniques included keeping notebooks, using mobile apps, flashcards, and exposure to academic reading materials.

“I kept a notebook of new academic words and reviewed it every day. It helped a lot during practice.”
(P-C8, Int-1.TVB)

“I practiced vocabulary from Barron’s and made flashcards. It made me more confident when facing hard words.”
(P-C6, Int-1.TVD)

“If I didn’t understand the word, I tried to guess it from the sentence. That worked most of the time.”
(P-C14, Int-1.TCG)

From the quantitative dataset, 9 of the 10 students who scored 45 or above reported engaging in daily or weekly vocabulary practice. These learners also demonstrated higher confidence in dealing with vocabulary-in-context questions. Conversely, all three participants who scored 30 reported minimal or irregular vocabulary training, and they struggled to understand key concepts in the reading texts. These findings suggest a strong association between consistent vocabulary reinforcement and improved reading comprehension, particularly in the context of the academic register used in the TOEFL test.

4.2.4 Active Reading Strategies

Students also described using techniques such as underlining, summarizing, and taking notes to help them process and retain information from the passage.

“I underline main ideas and write short notes while reading. It helps me remember where the information is later.”
(P-C3, Int-1.TAR)

“I usually summarize each paragraph in a few words in my head. That way, I don’t get lost when answering.”
(P-C11, Int-1, TMS)

Six participants, all of whom scored between 45 and 52, used these active reading strategies. They described feeling more focused and better able to track key information. These approaches reflect principles of metacognitive monitoring, where learners regulate their own comprehension through annotation and paraphrasing. However, among students who spent too much time annotating or highlighting large sections of text, some reported running out of time before answering all questions. Therefore, instruction should guide learners to adopt concise and targeted annotation practices that enhance retention without compromising pacing.

4.2.5 Timed Practice and Familiarity with Test Conditions

Engaging in timed reading practice was another widely used strategy. Students reported that practicing under simulated conditions improved their time management and reduced their anxiety during the actual exam.

“I took a lot of practice tests under time pressure. At first, I couldn’t finish, but then I got used to the pace and felt more confident.”
(P-C15, Int- 1.TMP)

“Timed practice helped me know how fast I should read and when to move on if I got stuck.”
(P-C10, Int- 1.TPA)

Among participants who practiced with timing at least once a week, 7 out of 8 showed improvement over five consecutive tests, with score increases ranging from 3 to 7 points. In contrast, those who only practiced sporadically or without time constraints showed stagnant or declining trends. This result underscores the value of routine, timed exposure not only for pacing skills but also for building test-day confidence.

4.2.6 Emotional Regulation and Psychological Preparedness

Some learners shared that anxiety and test panic previously interfered with their concentration, prompting them to develop emotional regulation strategies.

“I try to stay calm during the test by taking deep breaths. If I panic, I can’t think clearly.”
(P-C7, Int-1.TER)

“Before the test, I tell myself to focus and not be afraid of difficult passages. That helps me stay in control.”
(P-C13, Int- 1, TStM)

Participants who reported employing psychological coping mechanisms tended to complete more questions and report better focus across all reading sections. Emotional regulation is a key component of performance readiness. As such, TOEFL training programs should incorporate stress

management strategies, such as mindfulness, breathing techniques, and confidence-building routines, to prepare learners cognitively and emotionally.

4.2.7 Diverse Input and Exposure to Authentic English Materials

Some participants improved their reading ability by engaging with authentic materials such as academic articles, news websites, podcasts, and subtitled videos.

“I watch English news with subtitles and read articles about science and politics. That helps me understand academic language better.”
(P-C2, Int-1.TAE)

“Reading books and articles outside of TOEFL practice helps me adjust to different topics and writing styles.”
(P-C12, Int-1.TGA)

Students who engaged regularly with real-world English input demonstrated greater flexibility when faced with unfamiliar topics on the test. Their responses indicated improved handling of topic-specific texts, such as science or history. Exposure to diverse reading genres also helped them adapt to different rhetorical structures and syntactic variations, which is essential in a test that includes multi-disciplinary content.

4.2.8 Strategic Adaptation Based on Question Type

A few advanced learners reported intentionally modifying their approach depending on the type of question. They applied different techniques to vocabulary, inference, detail, and main idea questions.

“For inference, I read the paragraph twice and look for clues. For vocabulary, I guess based on nearby words. For main idea, I just look at the beginning and end of the passage.”
(P-C1, Int-1.TSD)

This level of strategic refinement reflects metacognitive awareness and is linked to higher test performance. The top three scorers in the sample all demonstrated this level of control. It suggests that educators should emphasize question-type classification and strategy matching to foster adaptability and precision in test-takers’ reading behavior.

In conclusion, the strategies employed by TOEFL learners reveal an encouraging trajectory toward strategic reading competence. However, the data underscore a critical gap between theoretical strategy awareness and the ability to execute these strategies consistently and fluently under exam conditions. While practices such as skimming, previewing questions, vocabulary drilling, and timed testing were widely adopted, their effectiveness varied according to the learner’s ability to internalize and adjust these

techniques in response to specific reading demands. Higher scores were generally associated with learners who practiced regularly, refined their approach based on performance feedback, and incorporated both cognitive and emotional preparation into their routines.

To bridge the execution gap, TOEFL preparation programs should include not only explicit strategy instruction but also performance-based simulations, individualized diagnostic feedback, and scaffolding that builds automaticity through repeated and varied practice. These findings also reinforce the importance of supporting learners' psychological resilience, as anxiety and mental fatigue emerged as influential variables in test behavior. In sum, strategic reading is not merely a matter of choosing the right technique, but of developing an integrated skill set that supports real-time comprehension, decision-making, and emotional regulation during high-stakes assessment contexts.

5. Discussion

Understanding the difficulties encountered by Indonesian EFL learners in mastering the TOEFL Reading section requires an analysis that goes beyond surface-level language proficiency. This study examined both performance outcomes and learner reflections to uncover the deeper cognitive and strategic disjunctions that affect test performance. By synthesizing quantitative score data and qualitative narratives, the discussion systematically addresses the research questions while drawing on contemporary theoretical frameworks in applied linguistics, cognitive load theory, and EFL pedagogy. The discussion is organized into two key parts: the first explores the major challenges learners face (RQ1), while the second investigates the strategies they employ to overcome these obstacles (RQ2).

RQ1: What are the main challenges faced by Indonesian EFL learners in mastering the TOEFL Reading section?

The study identified five interrelated and recurring challenges that significantly hinder Indonesian EFL learners' performance in the TOEFL Reading section: time management, lexical insufficiency, syntactic complexity, difficulties with inference and paraphrasing, and reduced cognitive stamina. These issues are not isolated language problems but result from the interplay of cognitive overload, limited strategic adaptability, and psychological strain. Drawing on both score analysis and learner testimonies, the findings highlight a critical disconnect between strategy awareness and real-time execution, which intensifies under high-pressure conditions.

Time management emerged as the most prevalent barrier. Despite being familiar with techniques such as skimming and scanning, eleven out of fifteen

participants reported failing to complete all reading questions, often resorting to guessing. This aligns with [Simanjuntak \(2018\)](#) and [Sudrajat and Astuti \(2018\)](#), who emphasize the challenge of translating strategic knowledge into performance under time constraints. Within the framework of Cognitive Load Theory ([Sweller, 2010](#)), this suggests that high task demands overload working memory, reducing learners' ability to coordinate comprehension and pacing effectively.

Vocabulary limitations, particularly with low-frequency academic terms, posed a serious threat to comprehension. Five participants with scores below 40 struggled to deduce meaning from unfamiliar vocabulary, which led to rereading and hesitation. This mirrors [Yigzaw and Chanie's \(2024\)](#) findings on the dominance of bottom-up processing and the inability to engage in contextual inference. These lexical gaps prevented learners from maintaining reading fluency, revealing both a lack of vocabulary depth and underdeveloped inferencing strategies.

Syntactic complexity, especially embedded clauses and dense rhetorical patterns, further compounded comprehension difficulties. Many learners reported rereading lengthy or complex sentences multiple times to grasp their meaning, indicating limitations in syntactic parsing. This observation reinforces [Hsu's \(2025\)](#) and [Mekuria et al.'s \(2024\)](#) conclusions about the mental load imposed by academic texts. According to [Sewell et al. \(2019\)](#), such textual complexity heightens intrinsic cognitive load, undermining working memory function and overall reading fluency.

Question-type sensitivity, particularly concerning inference and paraphrasing, revealed another gap in learners' cognitive flexibility. Many participants misinterpreted paraphrased options or struggled to identify implied meanings, selecting distractors that bore superficial similarity to the text. This echoes [Romadhon's \(2024\)](#) call for greater emphasis on training cognitive flexibility and semantic precision to address inference-related challenges effectively.

Finally, reduced cognitive endurance was evident as learners' performance declined in later reading passages. Several participants reported mental fatigue and declining focus, often guessing answers toward the end of the test. This trend supports findings by [Cho and Blood \(2020\)](#) and [Hsu \(2025\)](#), who noted the negative impact of sustained cognitive demand on task performance. However, cognitive stamina remains underexplored in TOEFL reading research, which tends to focus more on linguistic and item-level difficulty ([Morrison et al., 2014](#)). The depletion of attention over time highlights the need to integrate endurance-building activities into test preparation programs.

In sum, the study advances existing research by conceptualizing reading comprehension failures as the

result of dynamic interactions between cognitive demands, affective states, and strategic behavior. While previous studies such as those by [Fitria \(2024a\)](#) and [Simanjuntak \(2018\)](#) have acknowledged gaps in strategy application, this research contributes a novel perspective by emphasizing the “real-time” disintegration of strategy execution under testing conditions. Using Cognitive Load Theory, the study illustrates how time pressure, vocabulary ambiguity, and syntactic complexity converge to overload working memory and impair reading performance ([Sweller, 2010](#); [Sewell et al., 2019](#)). Additionally, the underrepresentation of emotional factors like anxiety and fatigue in TOEFL reading research is addressed here, with evidence that these affective variables mediate learners’ strategic failures during extended reading tasks ([Cho & Blood, 2020](#)).

The implications of these findings suggest that TOEFL preparation should evolve from static instruction of strategies to dynamic, integrated training. Instructional models must simulate high-pressure conditions, incorporate pacing routines, and build cognitive and emotional resilience through attention training and affective regulation. Future research should examine how adaptive technologies and AI-driven reading platforms can support metacognitive development and reduce cognitive overload. Additionally, longitudinal and cross-cultural studies are needed to explore how sociolinguistic contexts and strategy internalization interact to influence EFL learners’ reading outcomes and endurance in standardized tests.

RQ2: What strategies do learners adopt to overcome these challenges, and how effective are they?

This study examined the specific strategies employed by Indonesian EFL learners to address persistent difficulties in the TOEFL Reading section. Eight major strategies were identified, spanning from foundational approaches such as skimming and vocabulary drilling to higher-order techniques including strategic adaptation based on question type and emotional regulation. While these strategies reflect learners’ growing awareness of reading as a goal-directed cognitive task, their effectiveness was closely tied to the degree of internalization, contextual flexibility, and emotional readiness demonstrated during test performance.

Skimming and scanning emerged as the most frequently used techniques. These strategies served as entry points for locating main ideas and specific details, thus supporting efficient navigation of lengthy passages. Their widespread use aligns with pedagogical literature that advocates for surface-level textual mapping as a time-saving device in standardized assessments ([Agustin et al., 2023](#)). However, the data revealed that skimming and scanning alone were insufficient when facing complex

inference or paraphrasing questions. Learners who relied exclusively on these techniques often exhibited superficial comprehension and low accuracy. These findings are consistent with prior work by [Asani \(2022\)](#) and [McGee and Johnson \(2003\)](#), who reported that limited cognitive engagement restricts inferential understanding. Conversely, when learners integrated skimming with deeper analytical reading, they demonstrated stronger performance, as observed by [Elleman \(2017\)](#) who emphasized the benefits of layering surface and deep-level processing.

Another frequently reported technique was previewing questions before reading the passage. Eight out of eleven learners found this method effective in improving pacing and reducing cognitive disorientation. Previewing allowed learners to allocate attention more strategically and anticipate the type of information needed to answer comprehension items. These outcomes echo findings by [Rastegar et al. \(2017\)](#), who identified this technique as a facilitator of reading efficiency. However, as also noted by [Higgs et al. \(2023\)](#), previewing alone was not sufficient for answering global comprehension questions. Learners who merely skimmed the passage after previewing questions struggled with tasks requiring synthesis and rhetorical understanding. This limitation points to the importance of embedding previewing within a metacognitive framework. As shown by [Tavakoli \(2016\)](#), metacognitive strategy instruction enables learners to monitor and adjust their reading behavior in accordance with task complexity. Additionally, studies by [Villesseche et al. \(2019\)](#) and [Zhang et al., \(2017\)](#) highlight the role of adaptive strategy use in enhancing comprehension and task accuracy, a finding reinforced by the present study.

Vocabulary reinforcement strategies were commonly practiced, with learners using flashcards, academic texts, and personal notebooks. Learners who reported consistent vocabulary training scored higher and exhibited greater confidence when encountering unfamiliar terms. These findings validate previous research by [Delfi and Yamat \(2017\)](#) and [Riswanto et al. \(2019\)](#), both of whom linked vocabulary breadth with reading comprehension success. Nevertheless, many participants demonstrated difficulty applying lexical inference during the test, particularly when faced with unfamiliar academic terminology. This observation supports the argument by [Yigzaw and Chanie \(2024\)](#) that bottom-up lexical processing is insufficient when not supported by contextual reasoning. Thus, it becomes essential for instructors to complement vocabulary memorization with contextualized exposure and instruction in ambiguity management.

Active reading strategies such as note-taking, underlining, and summarizing were also identified as beneficial. Learners who actively interacted with the text through annotation or paraphrasing reported improved comprehension and information retention.

These practices are indicative of metacognitive self-regulation and align with findings in reading pedagogy that emphasize the value of strategic engagement (Simanjuntak, 2018). Timed practice, especially under simulated test conditions, further enhanced performance. Seven out of eight participants who practiced weekly with time constraints showed measurable improvements in test scores. This supports the claims of Wang and Cheng (2025) and Wahyuningsih et al. (2024), who argued that performance-based rehearsal builds procedural fluency and reduces test-day anxiety.

Emotional regulation was another key factor contributing to performance improvement. Participants reported employing calming techniques such as deep breathing, positive self-talk, and brief mental resets during the test. These behaviors enhanced focus and mitigated the effects of test-related anxiety. Alrabai (2022) underscored the role of emotional scaffolding in sustaining cognitive engagement during language learning, and the present findings affirm this relationship within the high-stakes testing context. Additionally, the psychological variables highlighted by Cho and Blood (2020) were evident in learners who sustained performance across reading passages by managing fatigue and emotional interference.

The most advanced strategy involved the adaptation of techniques according to question types. High-scoring learners selectively applied different approaches for vocabulary, inference, detail recognition, and summarization tasks. This behavior reflects high levels of metacognitive control and strategic differentiation, which are essential for optimizing reading outcomes. The studies of Irawan and Ahmad (2024) and Xiong (2024) also suggest that effective test takers not only understand individual strategies but also recognize when and how to apply them in varied contexts. Unfortunately, this level of strategy sophistication remains underrepresented in traditional TOEFL instruction, which often favors generic skill transmission over context-sensitive adaptation.

In sum, the findings reveal that while Indonesian EFL learners possess a growing repertoire of reading strategies, the effectiveness of these strategies depends heavily on internalization, integration, and adaptive use. The consistent gap between strategy awareness and execution, also discussed by Fitria (2024a), Romadhon (2024), and Simanjuntak (2018), underscores the need for dynamic instructional models. Preparation programs should emphasize strategy automatization through timed simulations, reflective practice, and individualized feedback. Emotional regulation should be systematically integrated into curriculum design, as it plays a decisive role in sustaining attention and managing cognitive load. Finally, the incorporation of adaptive learning technologies, as recommended by Mekuria et

al. (2024) and Zhang et al. (2024), could support real-time metacognitive training and personalized instruction, making strategy acquisition more responsive to learner variability and test complexity.

6. Conclusion

This study sheds light on the persistent and interrelated challenges that Indonesian EFL learners encounter in mastering the TOEFL Reading section, particularly time management difficulties, vocabulary constraints, text complexity and sentence structure, challenges with question types (especially inference and paraphrasing) and focus and mental endurance. Although learners were familiar with various strategies such as skimming and scanning, previewing questions, vocabulary development, active reading, timed practice, emotional regulation, and exposure to authentic English materials, many struggled to implement these techniques consistently under high-stakes testing conditions. The key findings reveal a critical gap between theoretical awareness and practical execution, particularly when cognitive overload or emotional fatigue interferes with performance. A central contribution of this research lies in its integration of cognitive linguistics and applied pedagogy to explore the real-time breakdown of strategic application, offering a more comprehensive understanding of how internal processes influence reading outcomes.

References

- Agustin, L., Wisudaningsih, E., & Fatmawati, R. (2023). Exploring how skimming and scanning fosters EFL students' reading comprehension at an English club senior high school in Indonesia. *Tamaddun*, 22(1), 20–27. <https://doi.org/10.33096/tamaddun.v22i1.309>
- Alavi, S., & Bordbar, S. (2012). A closer look at reading strategy use in reading section of TOEFL iBT. *Theory and Practice in Language Studies*, 2(3), 450–460. <https://doi.org/10.4304/tpls.2.3.450-460>
- Alrabai, F. (2022). The role of mixed emotions in language learning and teaching: A positive psychology teacher intervention. *System*, 107. <https://doi.org/10.1016/j.system.2022.102821>
- Asani, F. (2022). Students' difficulties analysis in reading comprehension at the second grade of MTs Nurul Ikhlas. *12 Waiheru, 8*(2), 176–186. <https://doi.org/10.47655/12waiheru.v8i2.19>
- Busa, J., & Chung, S. J. (2024). The effects of teacher-centered and student-centered approaches in TOEIC reading instruction. *Education Sciences*, 14(2), 181. <https://doi.org/10.3390/educsci14020181>
- Cerdán, R., Candel, C., & Leppink, J. (2018). Cognitive load and learning in the study of

- multiple documents. *Frontiers in Education*, 3. <https://doi.org/10.3389/feduc.2018.00059>
- Cho, Y., & Blood, I. (2020). An analysis of TOEFL® Primary™ repeaters: How much score change occurs? *Language Testing*, 37(4), 503–522. <https://doi.org/10.1177/0265532220927751>
- Delfi, S., & Yamat, H. (2017). Extensive reading in developing language competency for Indonesian EFL learners majoring in English. *IJELTAL (Indonesian Journal of English Language Teaching and Applied Linguistics)*, 1(2), 153. <https://doi.org/10.21093/ijeltal.v1i2.20>
- Elleman, A. (2017). Examining the impact of inference instruction on the literal and inferential comprehension of skilled and less skilled readers: A meta-analytic review. *Journal of Educational Psychology*, 109(6), 761–781. <https://doi.org/10.1037/edu0000180>
- Fitria, T. N. (2024a). Question types on reading comprehension in TOEFL test: An implication in teaching reading TOEFL to students. *Journal of English and Education (JEE)*, 10(1), 41–54. <https://doi.org/10.20885/jee.v10i1.33363>
- Fitria, T. N. (2024b). Teaching IELTS reading skills. *Pioneer: Journal of Language and Literature*, 16(1), 94–111. <https://doi.org/10.36841/pioneer.v16i1.3991>
- Fraser, K., Irene, W., Teteris, E., Baxter, H., Wright, B., & McLaughlin, K. (2012). Emotion, cognitive load and learning outcomes during simulation training. *Medical Education*, 46(11), 1055–1062. <https://doi.org/10.1111/j.1365-2923.2012.04355.x>
- Fraser, K., Ma, I., Teteris, E., Baxter, H., Wright, B., & McLaughlin, K. (2012). Emotion, cognitive load and learning outcomes during simulation training. *Medical Education*, 46(11), 1055–1062. <https://doi.org/10.1111/j.1365-2923.2012.04355.x>
- Galy, É., Cariou, M., & Mélan, C. (2012). What is the relationship between mental workload factors and cognitive load types? *International Journal of Psychophysiology*, 83(3), 269–275. <https://doi.org/10.1016/j.ijpsycho.2011.09.023>
- Hafid, H. (2022). Intensive TOEFL Course: Cara Cepat Meningkatkan Skor TOEFL Mahasiswa Jurusan Non-Bahasa Inggris. *PADMA: Jurnal Pengabdian Dharma Maitrey*, 2(1), 30–37. <https://doi.org/10.37478/padma.v2i1.1786>
- Haghani, F., Ghanbari, S., Barekatian, M., & Jamali, A. (2020). A systematized review of cognitive load theory in health sciences education and a perspective from cognitive neuroscience. *Journal of Education and Health Promotion*, 9(1), 176. https://doi.org/10.4103/jehp.jehp_643_19
- Higgs, S. (2023). Is there a role for higher cognitive processes in the development of obesity in humans? *Philosophical Transactions of the Royal Society B*, 378(1885), 20220208. <https://doi.org/10.1098/rstb.2022.0208>
- Hsu, L. (2025). Neural efficiency in EFL learning and positive psychology. *PLOS ONE*, 20(2), e0314730. <https://doi.org/10.1371/journal.pone.0314730>
- Irawan, L. A., & Ahmad, R. (2024). Reading comprehension and test-taking strategies of different achievement levels. *Journal of Foreign Language Teaching and Learning*, 9(2), 180–200. <https://doi.org/10.18196/ftl.v9i2.22663>
- Leba, W. E., Anugrah, A., & Ardhy, S. (2024). Chill to thrill: How ice-breaking transforms TOEFL preparation and student engagement. *Journal of English Language Teaching, Linguistics, and Literature Studies*, 4(1), 1–12. <https://doi.org/10.30984/jeltis.v4i1.2960>
- Lengkoan, F., Andries, F. A., & Tatipang, D. P. (2022). A study on listening problems faced by students of higher education. *Globish: An English-Indonesian Journal for English, Education, and Culture*, 11(1), 41–50. <https://doi.org/10.31000/GLOBISH.V11I1.5106>
- Leppink, J., & Duvivier, R. (2016). Twelve tips for medical curriculum design from a cognitive load theory perspective. *Medical Teacher*, 38(7), 669–674. <https://doi.org/10.3109/0142159X.2015.1132829>
- Llosa, L., & Malone, M. (2018). Comparability of students' writing performance on TOEFL iBT and in required university writing courses. *Language Testing*, 36(2), 235–263. <https://doi.org/10.1177/0265532218763456>
- McGee, A., & Johnson, H. (2003). The effect of inference training on skilled and less skilled comprehenders. *Educational Psychology*, 23(1), 49–59. <https://doi.org/10.1080/01443410303220>
- Mekuria, A., Bushisho, E. W., & Wubshet, H. (2024). The effects of reading strategy training on students' reading strategy use and critical reading ability in EFL reading classes. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2310444>
- Morrison, B., Dorn, B., & Guzdial, M. (2014). Measuring cognitive load in introductory CS. *Proceedings of the 45th ACM Technical Symposium on Computer Science Education*, 131–138. <https://doi.org/10.1145/2632320.2632348>
- Naismith, L., Cheung, J., Ringsted, C., & Cavalcanti, R. (2015). Limitations of subjective cognitive load measures in simulation-based procedural

- training. *Medical Education*, 49(8), 805–814. <https://doi.org/10.1111/medu.12732>
- Qian, L., Cheng, Y., & Zhao, Y. (2021). Use of linguistic complexity in writing among Chinese EFL learners in high-stakes tests: Insights from a corpus of TOEFL iBT. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.765983>
- Rastegar, M., Kermani, E. M., & Khabir, M. (2017). The relationship between metacognitive reading strategies use and reading comprehension achievement of EFL learners. *Open Journal of Modern Linguistics*, 7(2), 65–74. <https://doi.org/10.4236/ojml.2017.72006>
- Riswanto, Teferi, H., & Ahmed Abdel-Al Ibrahim, K. (2023). Cultivating EFL learners' productive skills by employing dynamic and non-dynamic assessments: Attitude in focus. *Language Testing in Asia*, 13(1), Article 18. <https://doi.org/10.1186/s40468-023-00234-4>
- Rizky, M., Nurhikmah, H., & Febriati, F. (2023). Exploring the potential of microlearning for TOEFL iBT preparation among high school students. *Journal of Educational Science and Technology (EST)*, 9(3), 220. <https://doi.org/10.26858/est.v9i3.51107>
- Romadhon, R. (2024). Cognitive levels in TOEFL iBT reading: A Bloom's revised taxonomy approach. *International Journal of Business, Humanities, Education and Social Sciences (IJBHES)*, 6(2), 106–116. <https://doi.org/10.46923/ijbhes.v6i2.412>
- Septiana, D. S., Setyono, B., & Tasnim, Z. (2021). The effect of applying group investigation method on vocational high school students' reading comprehension. *EFL Education Journal*, 8(1), 76–84. <https://doi.org/10.19184/eej.v8i1.30865>
- Sewell, J. L., Young, J. Q., Boscardin, C. K., Ten Cate, O., & O'Sullivan, P. S. (2019). Trainee perception of cognitive load during observed faculty staff teaching of procedural skills. *Medical Education*, 53(9), 925–940. <https://doi.org/10.1111/medu.13914>
- Simanjuntak, A. (2018). The effect of test preparation TOEFL reading tests. **Globish: An English-Indonesian Journal for English Education and Culture*, 7*(2). <https://doi.org/10.31000/globish.v7i1.844>
- Sudrajat, W. N. A., & Astuti, E. R. (2018). Students' perceptions of the use of TOEFL preparation online course on test performance: The case of TOEFL structure and written expression test. *Humaniora*, 9(3), 275–282. <https://doi.org/10.22146/jh.38150>
- Sungatullina, D., Zalyaeva, E., & Gorelova, Y. (2016). Metacognitive awareness of TOEFL reading comprehension strategies. *SHS Web of Conferences*, 26, 01046. <https://doi.org/10.1051/shsconf/20162601046>
- Sweller, J. (2010). Element interactivity and intrinsic, extraneous, and germane cognitive load. *Educational Psychology Review*, 22(2), 123–138. <https://doi.org/10.1007/s10648-010-9128-5>
- Tavakoli, H., & Koosha, M. (2016). The effect of explicit metacognitive strategy instruction on reading comprehension and self-efficacy beliefs: The case of Iranian university EFL students. *International Journal of Education and Literacy Studies*, 4(4), 53–60. <https://doi.org/10.7575/aiac.ijels.v.4n.4p.53>
- Villesseche, J., Le Bohec, O., Quaireau, C., Nogues, J., Besnard, A. L., Oriez, S., ... & Lavandier, K. (2019). Enhancing reading skills through adaptive e-learning. *Interactive Technology and Smart Education*, 16(1), 2–17. <https://doi.org/10.1108/ITSE-11-2018-0090>
- Wahyuni, R., Azisah, S., & Nur, M. (2022). Language learning strategies used by the successful TOEFL test-takers of English Education Department UIN Alauddin Makassar. *English Language Teaching for EFL Learners*, 4(1), 57–67. <https://doi.org/10.24252/elties.v4i1.25114>
- Wahyuningsih, Y., & Maretha, C. (2024). Proficient in English with advanced vocabulary using game-based learning: Narrative Crossword Puzzle. *Celtic: A Journal of Culture, English Language Teaching, Literature and Linguistics*, 11(2), 232–245. <https://doi.org/10.22219/celtic.v11i2.1686>
- Wang, C., Cheng, P., & Wang, T. (2022). Measurement of extraneous and germane cognitive load in the mathematics addition task: An event-related potential study. *Brain Sciences*, 12(8), 1036. <https://doi.org/10.3390/brainsci12081036>
- Xiong, Y. (2024). Investigating the impact of Collaborative Strategic Reading on reading comprehension and reading anxiety among high school EFL lower attainers. *English Teaching & Learning*, 48(1), 1–23. <https://doi.org/10.1007/s42321-023-00175-4>
- Yigzaw, A. A., & Chanie, B. S. (2024). Effects of explicit reading strategy instruction on students' reading comprehension and motivation: Grade 11 in focus. *Ethiopian Renaissance Journal of Social Sciences and the Humanities*, 11(1), 1–15. <http://ejol.ethernet.edu.et/index.php/ERJSSH/article/view/4613>
- Young, J., Merriënboer, J., Durning, S., & Cate, O. (2014). Cognitive load theory: Implications for

medical education: AMEE Guide No. 86.
Medical Teacher, 36(5), 371–384.
<https://doi.org/10.3109/0142159X.2014.889290>

Zalha, F., Alfiatunnur, A., & Kamil, C. (2020). Strategies in dealing with the reading section of 'TOEFL prediction': A case of Aceh EFL learners. *IJEE (Indonesian Journal of English Education)*, 7(2), 159–171.
<https://doi.org/10.15408/ijee.v7i2.17622>

Zhang, H. (2024). Cognitive load as a mediator in self-efficacy and English learning motivation among vocational college students. *PLoS ONE*, 19(11), e0314088.
<https://doi.org/10.1371/journal.pone.0314088>

Zhang, L., Zhang, L. J., & Liu, G. (2017). Metacognitive and cognitive strategy use in reading comprehension. In *Reading strategy and comprehension ability in L2* (pp. 55–74). Springer. https://doi.org/10.1007/978-981-10-4964-6_4

Zhang, S., Ji, M., Cui, W., Wei, J., Ding, S., & Wu, Y. (2023). Impact of delirium intervention on cognitive load among nurses in the intensive care unit: A multi-centre cluster randomized controlled trial. *International Journal of Nursing Practice*, 30(3), Article e13200.
<https://doi.org/10.1111/ijn.13200>

Zhou, Y., & Wei, M. (2018). Strategies in technology-enhanced language learning. *Studies in Second Language Learning and Teaching*, 8(2), 471–495.
<https://doi.org/10.14746/ssllt.2018.8.2.13>