

Academic Reading Challenges in Higher Education: Identifying Barriers and Strategic Responses among EFL Students

Jusak Patty *

English Education, Pattimura
University, Ambon, 97114,
Indonesia

jusak.patty@gmail.com

**Corresponding author*

Aldo Hattu

English Education, Pattimura
University, Ambon, 97114,
Indonesia

aldoaanyh@gmail.com

Inggrit O. Tanasale

English Education, Pattimura
University, Ambon, 97114,
Indonesia

tanasaleinggrit@gmail.com

 Submitted: 2025-04-26; Accepted: 2025-05-04; Published: 2025-06-05

Abstract— Academic reading proficiency is a fundamental determinant of success in higher education, particularly for English as a Foreign Language (EFL) students. This study examined the challenges faced by English Education Study Program students at Pattimura University when reading academic articles. Employing a mixed-methods approach with a convergent parallel design, the research integrated quantitative survey data (n=39) with qualitative insights from focus group discussions (n=8) to examine reading difficulties, contributing factors, and strategic responses. Findings revealed a hierarchical pattern of challenges, with linguistic difficulties (M=3.31) representing the most significant barrier, followed by cognitive processing (M=2.99) and strategic processing challenges (M=2.93). Complex sentence structures (M=3.28) emerged as the dominant linguistic challenge, surpassing specialized terminology (M=3.18) and unfamiliar vocabulary (M=3.21). Reader factors (M=3.11), particularly motivational sustainability with longer texts (M=3.21), exerted slightly greater influence than contextual factors (M=2.91). Students employed diverse strategies to navigate these challenges, including pre-reading orientation, vocabulary support mechanisms, and emerging technology-assisted approaches, though collaborative reading remained underutilized. Identifying "strategic inertia"—students' reluctance to experiment with new approaches—represents a novel contribution to understanding reading strategy development in academic contexts. These findings suggest that practical approaches to developing academic reading skills must simultaneously address multiple dimensions, including linguistic features, cognitive processes, strategic approaches, and affective factors.

Keywords— Academic reading, reading comprehension, EFL students, reading strategies, higher education.

I. INTRODUCTION

Reading proficiency constitutes a fundamental determinant of academic achievement within higher

education contexts, particularly where engagement with complex texts is requisite for knowledge acquisition and disciplinary participation. It is a critical receptive skill for EFL students, facilitating linguistic development through exposure to diverse concepts and knowledge frameworks (Amini et al., 2020; Magyar et al., 2022; Patty, 2023). Academic articles characterized by specialized discourse conventions present distinctive challenges requiring advanced comprehension strategies beyond those employed for general texts (Indriyani & Pertiwi, 2021; Rhead, 2019). Despite extensive language instruction, EFL students frequently experience significant difficulties with academic reading comprehension that extend beyond vocabulary recognition to encompass complex syntactic structures, dense content organization, sophisticated argumentation patterns, and cross-textual synthesis (Al-Jarrah & Ismail, 2018; Lawrence et al., 2022; Snow, 2018; Uccelli et al., 2015).

Recent empirical investigations have documented various dimensions of academic reading challenges in higher education contexts. Howard-Gosse et al. (2024) employed quantitative methods to examine reading difficulties among university students with reading challenges, revealing significant relationships between strategy selection and academic performance, with specific approaches benefiting struggling readers despite being counterproductive for typical readers. Cabrera-Pommiez et al. (2021) assessed first-year university students, documenting widespread deficiencies in higher-order comprehension tasks, particularly in extracting implicit information from academic texts. Complementing these findings, Dardjito et al. (2023) utilized qualitative methodologies to investigate non-English major students' experiences, highlighting vocabulary constraints and ineffective translation strategies as primary comprehension barriers. Collectively, these studies establish academic reading proficiency as a multifaceted challenge influenced by linguistic competence, prior knowledge, strategic awareness, and individual characteristics.

While existing research provides valuable insights into academic reading challenges, significant methodological

and contextual gaps persist in the literature. Although Cabrera-Pommiez et al. (2021) and Dardjito et al. (2023) address academic reading broadly, they do not sufficiently examine the distinctive structural and rhetorical features that characterize academic articles as a specialized genre with unique comprehension demands. Cabrera-Pommiez et al. (2021) focus on general academic literacy skills without differentiating between various scholarly text types. Dardjito et al. (2023) emphasize vocabulary and translation difficulties without adequate attention to discourse structure complexities particular to research articles. Additionally, the participant population differs substantially across studies, with Howard-Gosse et al. (2024) examining psychology students, Cabrera-Pommiez et al. (2021) investigating a diverse cross-section of university entrants, and Dardjito et al. (2023) focusing on non-English majors. None of these studies specifically addresses the unique position of English Education students, who must comprehend academic articles for their learning and develop the pedagogical knowledge to facilitate such comprehension in their future students. Furthermore, current investigations predominantly rely on mono-method approaches (Cabrera-Pommiez et al., 2021; Dardjito et al., 2023; Howard-Gosse et al., 2024), whereas an integrated design would enable simultaneous quantitative assessment of challenge distribution and qualitative exploration of experiential dimensions. These limitations necessitate a comprehensive investigation that examines the specific nature of academic article reading challenges within the specialized context of English Education.

A preliminary investigation conducted at Pattimura University's English Education Study Program provides context for the current research. This study involved 29 students from the 2019 cohort and revealed that all participants (100%) had engaged with academic articles, with research articles being universally read (100%). Additional engagement was reported with theoretical articles (34.5%), case studies (27.6%), review articles (24.1%), and methodological articles (24.1%). Regarding reading frequency, most respondents (75.9%) reported reading academic articles 3-4 times weekly, 17.2% engaged with such texts 1-2 times per week, and a smaller proportion (6.9%) read more than 4 times weekly. Notably, almost all participants (96.6%) reported utilizing supportive resources such as dictionaries or online materials to facilitate their comprehension, indicating widespread recognition of the inherent challenges associated with academic reading.

The present study addresses these identified research gaps through a comprehensive analysis of the problems students encounter when reading academic articles, explicitly focusing on students in the English Education Study Program at Pattimura University. This investigation employs a mixed-methods approach with convergent parallel design to achieve three principal objectives: (1) to identify the main problems faced by students while reading academic articles, (2) to analyze the factors contributing to these difficulties, and (3) to discover the strategies students employ to overcome these challenges. By integrating

quantitative survey data with qualitative insights from focus group discussions, this research contributes empirically grounded knowledge to the domain of academic reading pedagogy, potentially informing the development of targeted instructional approaches to enhance students' engagement with scholarly literature within discipline-specific contexts.

II. LITERATURE REVIEW

A. Reading Comprehension in Academic Contexts

Reading comprehension constitutes a multidimensional cognitive process through which readers construct meaning from textual information. Theoretical frameworks like the Simple View of Reading (SVR) propose that comprehension arises from the interaction between decoding abilities and language comprehension skills, emphasizing that both components are essential for adequate understanding (Gough & Tunmer, 1986). The Interactive-Compensatory Model (ICM), introduced by Stanovich (1980), complements this by illustrating how readers can compensate for weaknesses in one skill, such as decoding, by relying on strengths in another, like contextual knowledge. While SVR and ICM focus primarily on cognitive processes, contemporary models like the Active View of Reading (AVR) highlight that successful comprehension also depends on reader-centered factors, such as motivation and executive function, as well as external elements, including text structure and socio-cultural context (Duke & Cartwright, 2021). This complexity underscores the need for integrated strategies to enhance students' reading proficiency.

The importance of reading comprehension extends throughout higher education, significantly influencing academic outcomes across disciplines. Research by Urrutia et al. (2024) demonstrates a direct relationship between comprehension abilities and student performance and retention in university settings. Studies examining reading behaviors have also revealed that effective comprehension strategies correlate with heightened motivation and academic persistence (Talwar et al., 2023). Despite these established connections, scholars argue that existing theoretical frameworks may inadequately address the diverse variables affecting comprehension among heterogeneous student populations. For instance, Garcia (2023) highlights the critical role of executive functions (e.g., working memory, cognitive flexibility) in English reading comprehension among Filipino students—factors often overlooked in models like the SVR, which prioritizes decoding and language comprehension. Similarly, McNeil (2012) contends that compensatory strategies in second-language reading, such as reliance on contextual cues, must account for socio-cultural familiarity and linguistic proficiency—a limitation of ICM, which originally focused on cognitive compensation. These critiques suggest the need for more inclusive frameworks, such as the AVR, which integrates cognitive, contextual, and motivational dimensions to address linguistic diversity and learner variability in academic reading contexts.

B. Challenges and Factors in Academic Article Comprehension

Students face multidimensional challenges when engaging with academic articles, broadly categorized into linguistic, cognitive, and strategic processing domains. Linguistic barriers, particularly specialized terminology and complex syntactical structures are well-documented obstacles in scholarly writing, especially for non-native readers (Cabrera-Pommiez et al., 2021; Dardjito et al., 2023). These challenges often restrict access to disciplinary discourse and impede comprehension. Cognitive demands, such as integrating new information with prior knowledge and sustaining critical analysis, further complicate academic reading, requiring higher-order thinking skills that many learners find challenging to master (Cabrera-Pommiez et al., 2021). Strategic inefficiencies compound these issues, as students frequently lack awareness of or inconsistently apply evidence-based reading approaches, leading to fragmented comprehension practices (Cabrera-Pommiez et al., 2021; Dardjito et al., 2023; Howard-Gosse et al., 2024).

The relationship between reader characteristics and contextual variables significantly shapes academic reading outcomes. Previous research underscores prior knowledge as a critical predictor of success, with students possessing robust background understanding demonstrating superior ability to embrace complex textual information (Belouiza et al., 2024). Motivational factors, including intrinsic interest and persistence, further influence strategy selection and implementation as engaged readers more effectively deploy comprehension techniques (Miyamoto et al., 2019). Environmental elements, such as institutional support systems and feedback mechanisms, also play pivotal roles in mitigating or exacerbating reading difficulties (Ghani et al., 2022). For instance, distractions in learning environments can disrupt focus, while structured guidance enhances strategic competence. These dynamics highlight the need for interventions that address individual capacities and contextual conditions to optimize academic reading proficiency.

C. Strategic Approaches in Academic Article Comprehension

Research on academic reading comprehension has identified several strategic approaches facilitating effective engagement with scholarly texts. Pre-reading orientation strategies, including previewing, skimming, or scanning, have been established as foundational techniques that provide readers with conceptual frameworks before detailed textual engagement (Yung et al., 2024). These anticipatory techniques function as cognitive scaffolds that prepare readers for more systematic processing of complex academic discourse. Concurrent with these preliminary approaches, vocabulary support mechanisms—including dictionary consultation and translation tools—address linguistic barriers that frequently impede comprehension flow (Muryani & Yunus, 2024). The literature further distinguishes between process-oriented strategies, such as multiple recursive

readings and selective text processing, and structured methodological approaches like SQ3R (Survey, Question, Read, Recite, Review), which offer comprehensive frameworks for systematic engagement with scholarly texts (Siregar et al., 2020).

Information organization techniques, particularly annotation and mind mapping, have been documented as effective cognitive scaffolding mechanisms that support the retention and integration of complex academic content (Van Amelsvoort, 2024). Contemporary research has increasingly recognized the emergence of technology-assisted reading strategies, including artificial intelligence tools to simplify complex academic language and enhance accessibility (Pinzolit, 2023). Despite the demonstrated efficacy of collaborative reading approaches, including peer discussion and expert consultation, research suggests these strategies remain underutilized in academic contexts where reading is predominantly conceptualized as an individual activity (Howard-Gosse et al., 2024). The literature consistently emphasizes that no single strategic approach adequately addresses all reading challenges (Alamri & Ahmed, 2021), highlighting the importance of developing flexible strategic repertoires that can be deployed contextually based on specific textual demands and reader characteristics.

III. METHODS

This study employed a mixed-methods approach with a convergent parallel design to examine students' problems in reading academic articles. This methodological framework was selected to obtain comprehensive insights by simultaneously collecting and analyzing quantitative and qualitative data, assigning equal weight to each approach, and integrating the findings to derive holistic conclusions (Creswell & Creswell, 2023). The convergent parallel design facilitated the triangulation of data sources, enabling a more robust understanding of students' complex challenges when engaging with academic articles while maintaining methodological rigor throughout the investigation. The complete research procedure can be seen in Figure 1, illustrating the sequential and parallel processes implemented throughout the study.

The research process began with thorough preparation, which involved a comprehensive literature review to establish theoretical foundations, formulation of research questions, and selection of the mixed-methods approach. Based on this foundation, two primary instruments were developed: a Likert-scale questionnaire comprising 25 items examining students' problems in reading academic articles and contributing factors, with response options ranging from 1 (Strongly Disagree) to 4 (Strongly Agree) and a semi-structured focus group discussion protocol designed to explore participants' experiences in greater depth. The questionnaire underwent rigorous validation through content validity assessment by language education lecturers, followed by a pilot study to measure statistical validation using Pearson Product Moment correlation analysis and reliability testing with Cronbach's Alpha ($\alpha=0.743$), confirming its psychometric soundness. The

pilot study provided final refinements before implementation with the leading research participants.

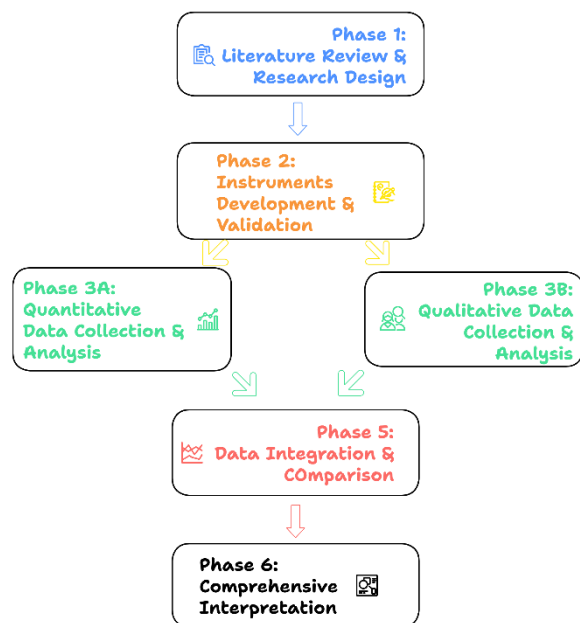


Figure 1. Research Procedures

The population comprised 68 ninth-semester students (Class of 2019) enrolled in the English Education Study Program at Pattimura University, distributed across Class A and Class B. Simple random sampling was employed to ensure equitable representation, resulting in Class A (n=39) selection for questionnaire administration. For the qualitative component, eight volunteering participants were recruited and divided into two equal focus groups to enable an in-depth exploration of experiences and strategies related to academic reading.

Following the instrument development and validation, the research proceeded along parallel tracks for data collection and analysis. The quantitative process involved distributing the questionnaire via Google Forms to all 39 participants, followed by data screening for completeness and analysis using SPSS software version 26. Descriptive statistics techniques were applied to calculate the frequency and mean for each questionnaire item, with results categorized according to the interpretation framework: Very Low (1.00-1.75), Low (1.76-2.50), High (2.51-3.25), and Very High (3.26-4.00). Concurrently, the qualitative process included conducting focus group discussions with the volunteer subset, each session lasting approximately 60-90 minutes and audio-recorded with participants' consent. For data organization and confidentiality purposes, participants were assigned identification codes based on their group membership (G1 or G2) and participant number within the group (e.g., P1_G1 refers to the first participant in Group 1). The recorded discussions were transcribed and analyzed using thematic analysis with a predetermined coding framework derived from the research questions and literature review. This deductive approach involved systematic identification and categorization of data according to

established theoretical constructs, followed by synthesis of coded segments to identify patterns and relationships (Naeem et al., 2023). Member checking was implemented to ensure the credibility of qualitative findings, and preliminary analysis results were shared with focus group participants for verification and feedback.

After completing both quantitative and qualitative analyses, data integration and comparison were performed through side-by-side examination of results from both methods. This process involved identifying patterns of convergence and divergence between datasets, assessing the extent to which qualitative findings explained or expanded quantitative results, and recognizing complementary insights that emerged from the integration. This systematic comparison allowed for a more comprehensive understanding of the research questions than either method could provide independently.

The final phase involved a comprehensive interpretation of the integrated findings. During this phase, results were contextualized within theoretical frameworks and previous research to develop meaningful conclusions and implications with practical relevance for academic reading instruction. This interpretation addressed the three research objectives concerning challenges in academic article reading, contributing factors, and strategic responses, producing a nuanced understanding of students' experiences that can inform pedagogical approaches.

IV. RESULTS AND DISCUSSION

This section presents and interprets the results from both quantitative and qualitative analyses, addressing the study's three primary research objectives concerning challenges in academic article reading. Integrating survey data and focus group insights creates a multidimensional understanding of students' experiences while contextualizing them within broader theoretical frameworks.

A. Students' Problems in Reading Academic Articles

The investigation into reading challenges revealed a hierarchical pattern of difficulties English Education Study Program students face. As illustrated in Figure 2, linguistic challenges dominated the landscape of reading difficulties with the highest overall severity (M=3.31, Very High), followed by cognitive processing challenges (M=2.99, High) and strategic processing challenges (M=2.93, High). This pattern suggests that language-related barriers are primary impediments to compelling academic reading, with cognitive and strategic difficulties operating as secondary though still significant obstacles.

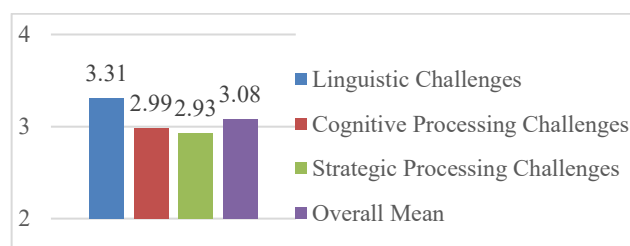


Figure 2. Comparative Severity of Reading Challenges

As presented in Table 1, complex sentence structures emerged as particularly problematic (M=3.28, Very High) within the linguistic domain, surpassing even specialized terminology (M=3.18, High) and unfamiliar vocabulary (M=3.21, High) as barriers to comprehension. Focus group participants frequently described how encountering syntactically complex sentences disrupted their reading process: *"Personally, I often struggle with lengthy and structurally complex sentences found in articles, particularly academic ones. Parsing through these sentences can be challenging, and I may need to read them multiple times to understand their meaning fully"* (P1_G2).

While vocabulary limitations registered as comparatively less challenging (M=3.03, High), focus group data revealed that vocabulary-related issues often triggered cascading effects on comprehension. Participants described how encountering unfamiliar terms could disrupt their entire reading process: *"When I did my readings on the articles that are related to my proposal, I found some terminology that is not related to my proposal, and at that moment, suddenly I lost all the information"* (P1_G1).

Table 1. Linguistic Challenges

No.	Item	Scale				Mean	Category
		1	2	3	4		
1	I find it difficult to comprehend academic articles due to unfamiliar vocabulary.	0	1	29	9	3.21	High
2	I struggle to understand academic articles fully because of vocabulary limitations.	0	2	34	3	3.03	High
3	Encountering specialized terminology in academic articles significantly impedes my comprehension.	0	5	22	12	3.18	High
4	I find complex sentence structures in academic articles difficult to parse and understand.	0	0	28	11	3.28	Very High
5	I have difficulty understanding academic texts written in formal academic English.	0	6	25	8	3.05	High
6	I struggle to distinguish between main arguments and supporting evidence in academic articles.	0	3	30	6	3.08	High
Mean						3.31	Very High

The cognitive processing challenges presented in Table 2 reveal that connecting new information with existing knowledge presented the most significant difficulty (M=3.18, High), while concentration maintenance posed relatively fewer challenges (M=2.67, High). This disparity highlights the particularly demanding nature of knowledge integration during academic reading, as one participant explained: *"In my view, my ability to retain information from articles heavily relies on how well the material aligns with my existing background knowledge. If the content is unfamiliar, I often struggle to remember the information"* (P1_G1).

External distractions also presented notable challenges (M=3.08, High), with participants citing various environmental factors disrupting their reading process. One student noted: *"External distractions like noisy environments or device notifications often disrupt my attention when I am reading academic articles"* (P1_G1). The substantially higher rating for external distractions than internal concentration loss suggests that environmental factors may pose more significant barriers than intrinsic attentional capacity.

Table 2. Cognitive Processing Challenges

No.	Item	Scale				Mean	Category
		1	2	3	4		
7	I struggle to understand academic articles when I lack sufficient background knowledge on the topic.	0	2	34	3	3.03	High
8	I find it difficult to make connections between new information in academic articles and my existing knowledge.	0	5	22	12	3.18	High
9	I have difficulty recalling specific information from academic articles after finishing reading them.	0	5	31	3	2.95	High
10	I need to read academic articles multiple times to retain the information presented adequately.	1	5	28	5	2.95	High
11	I struggle to hold earlier information in mind while processing later sections of academic articles.	0	6	25	8	3.05	High
12	I find my attention drifting when reading academic articles for more than a short period.	0	8	23	8	3.00	High
13	I frequently lose my concentration while reading academic articles, requiring me to reread sections.	0	17	18	4	2.67	High
14	External distractions significantly disrupt my ability to focus when reading academic articles.	0	5	26	8	3.08	High
Mean						2.99	High

As shown in Table 3, strategic challenges centered primarily on technical execution rather than conceptual understanding, with skimming techniques proving most challenging ($M=3.03$, High) and implementing appropriate strategies for complex articles registering as comparatively less difficult ($M=2.85$, High).

Focus group data revealed a pattern of strategic inertia, with many participants expressing reluctance to experiment with new approaches: *"No, we have not experimented with different strategies since the strategies that we use are most likely the appropriate strategies for us"* (P2_G1).

Table 3. Strategic Processing Challenges

No.	Item	Scale				Mean	Category
		1	2	3	4		
15	I find it difficult to apply skimming techniques when reading academic articles effectively.	0	4	30	5	3.03	High
16	I struggle to implement appropriate reading strategies when faced with complex academic articles.	0	8	29	2	2.85	High
17	I have difficulty determining which reading strategies would be most effective for different types of academic articles.	0	9	24	6	2.92	High
		Mean				2.93	High

This hierarchical pattern of reading difficulties—linguistic, cognitive, and strategic—reveals that advanced EFL learners face complex barriers in academic reading, extending prior research and theory. Complex sentence structures emerged as the dominant linguistic challenge, surpassing vocabulary-related issues. While this aligns with Cabrera-Pommiez et al.'s (2021) identification of text-level comprehension barriers in Indonesian students, it diverges by isolating syntactic complexity as a distinct, under-compensated obstacle for advanced learners. This contrasts with Dardjito et al. (2023), who emphasized vocabulary deficits in non-English majors, suggesting a developmental trajectory where syntactic demands overshadow lexical challenges as proficiency grows.

These findings refine Stanovich's (1980) Interactive-Compensatory Model: while the model posits that readers compensate for weaknesses (e.g., vocabulary) with strengths (e.g., context), syntactic complexity disrupts this interplay in EFL contexts, creating cascading failures unmitigated by vocabulary or strategic knowledge. For instance, learners struggled to parse embedded clauses despite strong lexical skills, indicating that mid-level syntactic barriers resist compensatory mechanisms, challenging traditional models' binary lower/high-level hierarchy.

Cognitive challenges centered on integrating new information with prior knowledge, supporting Duke &

Cartwright's (2021) Active View of Reading, which positions comprehension as emerging from dynamic text-reader-context interactions rather than isolated decoding and language skills. This aligns with Garcia's (2023) focus on executive functions, particularly working memory limitations, though diverging in emphasizing their direct impact—a contrast potentially explained by task complexity or participant profiles (e.g., less skilled readers). Qualitative data revealed vocabulary-driven cascading failures (*"suddenly I lost all information"*), challenging the Simple View's multiplicative model by illustrating how localized gaps disrupt global coherence. Environmental distractions outweighed internal focus issues, extending prior frameworks to underscore socio-cultural influences on comprehension. These findings collectively bridge cognitive and environmental dimensions, enriching models of reading beyond static skill hierarchies.

B. Factors Contributing to Reading Difficulties

Investigating contributing factors revealed the interplay between reader and text characteristics in shaping reading difficulties. As illustrated in Figure 3, reader factors exhibited slightly greater influence ($M=3.11$, High) than contextual factors ($M=2.91$, High), suggesting that internal characteristics marginally outweigh textual properties in determining comprehension outcomes.

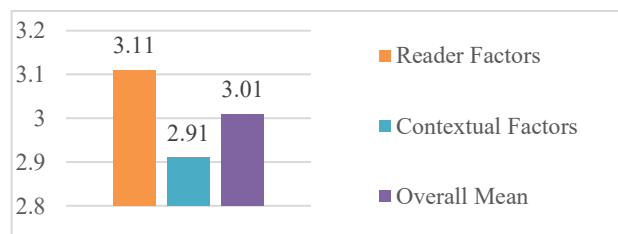


Figure 3. Comparative Influence of Contributing Factors

As shown in Table 4, motivational aspects emerged as particularly influential within reader factors. Sustaining motivation with longer texts presented the most significant challenge ($M=3.21$, High), surpassing even emotional interference ($M=3.18$, High). While still significant, interest level and critical perspective maintenance ($M=3.03$, High) exerted comparatively less influence. This pattern highlights the central role of motivational sustainability in academic reading success.

The qualitative data revealed complex interactions between affective states and reading performance. Participants described a bidirectional relationship where reading experiences both influenced and influenced emotional conditions: *"I have noticed that mood plays a significant role in my reading process... When I am in a positive mood, such as feeling excited or curious, I find that my focus and comprehension are heightened. On the other hand, when I am experiencing negative emotions like stress or fatigue, I struggle to concentrate and stay motivated"* (P2_G1).

Table 4. Reader Factors

No.	Item	Scale				Mean	Category
		1	2	3	4		
18	I struggle to maintain motivation when reading academic articles, particularly longer ones.	0	1	29	9	3.21	High
19	My interest level in the topic significantly affects my ability to engage with academic articles.	0	2	34	3	3.03	High
20	My emotional state often interferes with my ability to concentrate on academic articles.	0	5	22	12	3.18	High
21	I find it difficult to maintain a critical perspective when reading academic articles.	0	4	30	5	3.03	High
Mean						3.11	High

Table 5 reveals that contextual factors presented a different pattern of influence, with structural elements posing greater challenges than stylistic features. Complex sentence structures and organizational structure emerged as equally challenging (M=3.00, High), while formal academic writing presented relatively fewer difficulties (M=2.67, High). This substantial differential (0.33) suggests that students have greater facility with the academic register than with the complex structural elements embedded in it.

Focus group discussions revealed geographic variations in textual difficulty, with participants noting particular challenges with articles from certain regions: *"The formatting conventions can indeed pose a challenge, especially when dealing with texts from regions outside Indonesia, such as India, Pakistan, or Uzbekistan. Often, the spacing in these texts is narrower than Indonesian standards"* (P4_G1). This finding suggests that cultural and linguistic conventions embedded in academic texts may present additional complexity beyond basic features.

Table 5. Contextual Factors

No.	Item	Scale				Mean	Category
		1	2	3	4		
22	I find the complex sentence structures commonly used in academic articles difficult to process.	0	3	33	3	3.00	High
23	I have difficulty following the organizational structure of academic articles despite their headings and subheadings.	0	8	23	8	3.00	High
24	I find the dense and technical language used in academic articles creates significant obstacles to my comprehension.	0	5	31	3	2.95	High

No.	Item	Scale				Mean	Category
		1	2	3	4		
25	I struggle to adapt to the formal writing style typical of academic articles.	0	17	18	4	2.67	High
Mean						2.91	High

Reader factors exerted slightly greater influence than contextual factors, with motivational sustainability and longer texts presenting the most significant challenge, surpassing emotional interference and interest level. This pattern provides empirical support for Miyamoto et al.'s (2019) assertions regarding the relationship between intrinsic motivation and reading comprehension, while the lower rating for interest compared to sustainability represents a novel finding, suggesting that sustained engagement may depend less on initial interest than on persistence with challenging content.

Among contextual factors, complex sentence and organizational structures emerged as equally challenging, substantially exceeding formal academic writing style. Focus group data further revealed geographical variations in textual difficulty, with articles from certain regions presenting unique formatting challenges, suggesting that academic reading proficiency involves navigating culturally embedded textual practices beyond mere linguistic conventions—extending McNeil's (2012) critique of the Interactive-Compensatory Model by illustrating how socio-cultural familiarity influences reading processes.

C. Strategies Employed to Overcome Reading Challenges

As detailed in Table 6, the strategic landscape revealed various approaches with varying frequency and application, with seven distinct strategy categories emerging from the qualitative data showing established patterns and emerging trends in how students navigate academic reading challenges.

Pre-reading orientation strategies emerged as foundational approaches for establishing conceptual frameworks before detailed engagement. Most participants reported utilizing abstract and conclusion reviews to preview content and findings. As one student explained: *"I often start by reading the abstract of an article to get a general overview of its topic. Next, I examine the conclusion of the article to understand the main findings or arguments presented"* (P1_G1). These anticipatory techniques addressed strategic processing challenges by providing advance organizers for more systematic reading.

Vocabulary support represented another cornerstone of students' strategic approaches, with dictionary use and translation tools nearly universally employed. The ubiquity of these resources directly reflects the linguistic challenges identified in the quantitative data: *"I often utilize aids like dictionaries or Google Translate. This enables me to promptly translate any unfamiliar vocabulary I come across, thereby facilitating my reading process"* (P2_G2). These tools provided targeted support for vocabulary-related barriers, which, though not rated as

the most severe linguistic challenge, appeared particularly disruptive to the reading flow.

Process-oriented approaches, particularly multiple readings, constituted a third high-frequency strategy category. Participants described iterative approaches to text processing: *"For me, I usually start by quickly reading or skimming through the article first. After that, I read it again thoroughly, and if I still do not fully understand, I will read it once more"* (P1_G2). This phased approach addressed cognitive challenges by distributing processing across multiple encounters with the text, reducing mental load during any single reading.

Structured methodological approaches saw more limited implementation despite reported effectiveness. While some participants described using the SQ3R method, most reported incomplete application: *"I have occasionally employed the SQ3R method, although I often skip some steps such as questioning and reviewing. Nevertheless, I find the SQ3R method to be highly effective"* (P1_G1). This strategic gap between awareness and implementation suggests opportunities for more systematic instruction in comprehensive reading methodologies.

An emerging trend appeared in technology-assisted reading, with several participants reporting the use of artificial intelligence tools to simplify complex academic language: *"I seek assistance from AI tools like ChatGPT to simplify the writing style of the articles I read, allowing me*

to understand them more easily" (P3_G1). While this strategy appeared with medium frequency, its emergence suggests evolving approaches to academic reading that leverage contemporary technological resources to address persistent challenges.

Collaborative approaches represented the least frequently reported strategy despite potential benefits. The limited adoption of peer-based techniques reflects both practical constraints and predominant conceptions of reading as an individual activity: *"I usually read articles on my own, but when I encounter difficulties, particularly with vocabulary or other aspects related to academic articles, I seek assistance from friends whom I believe are capable of covering my deficiencies"* (P1_G1). This finding suggests potential value in more systematic integration of collaborative reading practices within academic contexts.

Information organization techniques, particularly mind mapping, served cognitive scaffolding functions for a subset of participants: *"I often rely on the mind mapping method, and personally, I find it highly effective. Mind mapping provides a broad overview of the articles I read, illustrating key terms, research objectives, and whether the goals of the study are beneficial to my own research"* (P1_G1). These techniques directly addressed information retention and integration challenges by supporting external memory.

Table 6. Strategic Approaches to Academic Reading Challenges

Strategy Category	Specific Approaches	Representative Quotation	Reported Frequency	Primary Challenge Addressed
Pre-reading Strategies	Abstract and conclusion review, Skimming	<i>"I often start by reading the abstract of an article to get a general overview of its topic. Next, I examine the conclusion of the article to understand the main findings or arguments presented."</i> (P1_G1)	High	Strategic Processing
Reading Process Strategies	Multiple readings, Selective reading	<i>"For me, I usually start by quickly reading or skimming through the article first. After that, I read it again thoroughly, and if I still do not fully understand, I will read it once more."</i> (P1_G2)	High	Cognitive Processing
Structured Reading Methods	SQ3R (Survey, Question, Read, Recite, Review)	<i>"I have occasionally employed the SQ3R method, although I often skip some steps such as questioning and reviewing. Nevertheless, I find the SQ3R method to be highly effective."</i> (P1_G1)	Medium	Multiple
Note-taking and Organization	Mind mapping, Annotation	<i>"I often rely on the mind mapping method, and personally, I find it highly effective. Mind mapping provides a broad overview of the articles I read, illustrating key terms, research objectives, and whether the goals of the study are beneficial to my own research."</i> (P1_G1)	Medium	Cognitive Processing
Vocabulary Support	Dictionary use, Translation tools	<i>"I often utilize aids like dictionaries or Google Translate. This enables me to promptly translate any unfamiliar vocabulary I come across, thereby facilitating my reading process."</i> (P2_G2)	High	Linguistic
Technology Assistance	AI tools (ChatGPT, Perplexity)	<i>"I seek assistance from AI tools like ChatGPT to simplify the writing style of the articles I read, allowing me to understand them more easily."</i> (P3_G1)	Medium	Linguistic
Collaborative Approaches	Peer discussion, Expert help	<i>"I usually read articles on my own, but when I encounter difficulties, particularly with vocabulary or other aspects related to academic articles, I seek assistance from friends whom I believe are capable of covering my deficiencies."</i> (P1_G1)	Low	Multiple

The relationship between reading challenges and strategic approaches shown in Figure 4 underscores the

importance of developing flexible strategic repertoires for academic reading success as students develop personalized

approaches aligned with their specific needs and learning preferences.

Pre-reading orientation strategies and vocabulary support mechanisms were widely employed, aligning with Howard-Gosse et al.'s (2024) findings on strategy selection patterns among university readers. However, the reported reluctance to experiment with new approaches (*"we have not experimented with different strategies"*) revealed strategic inertia not previously documented in the literature. This pattern raises questions about how strategic repertoires develop and stabilize in academic contexts, suggesting that students may prematurely settle on functional but potentially suboptimal approaches.

The emergence of technology-assisted reading strategies, particularly artificial intelligence tools, represents a significant departure from previously documented approaches, extending Pinzolit's (2023) observations regarding AI applications in academic contexts. The underutilization of collaborative approaches despite potential benefits confirms that reading remains predominantly conceptualized as an individual activity despite evidence supporting social learning approaches, indicating a possible area for pedagogical intervention.

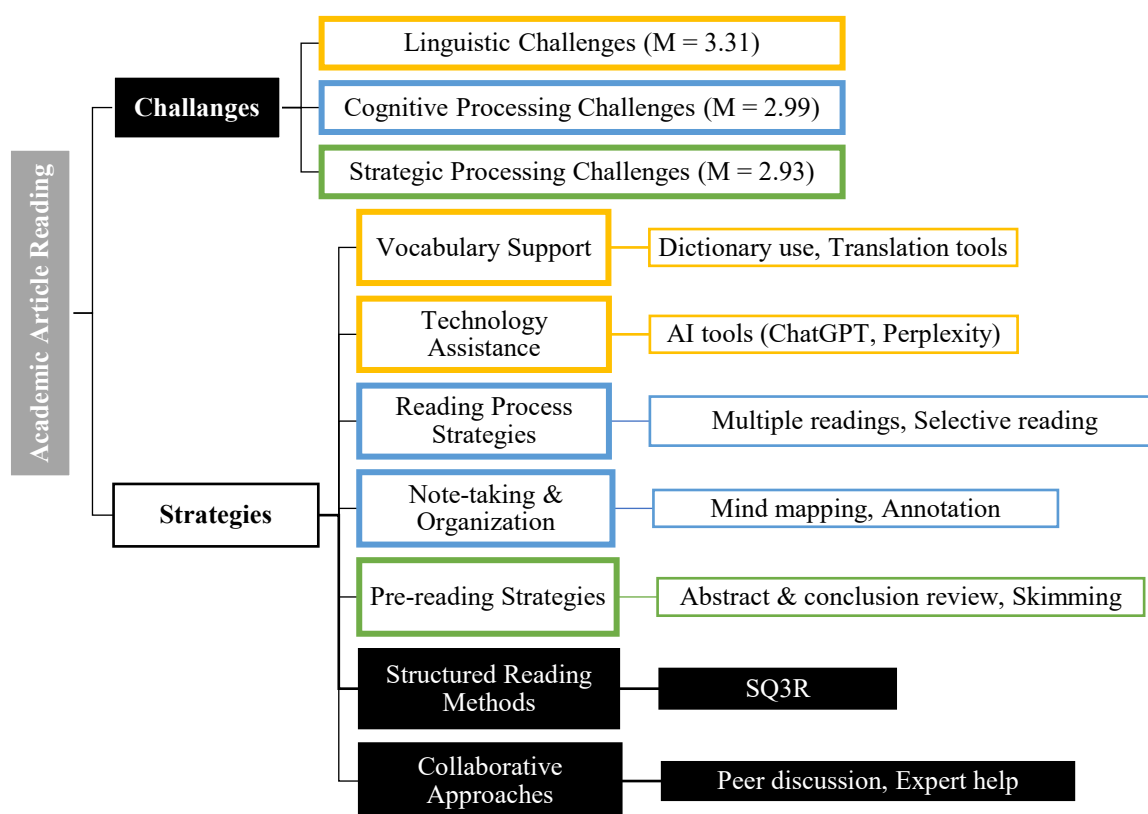


Figure 4. Relationship between Reading Challenges and Strategic Approaches

The findings from this study have several implications for instructional approaches in higher education. The primacy of syntactic complexity suggests that pedagogical interventions should extend beyond vocabulary development to include explicit instruction in navigating complex sentence structures typical of academic discourse. The identified strategic inertia necessitates addressing mindsets that inhibit flexibility and experimentation. At the same time, the emergence of technology-assisted reading strategies requires approaches that leverage these tools while developing autonomous comprehension skills. Additionally, findings regarding motivational sustainability suggest instructional focus on specific techniques for maintaining engagement with challenging texts over extended periods, such as chunking strategies and structured goal-setting approaches designed for extended academic reading tasks.

Several limitations must be acknowledged when interpreting these findings, including the focus on ninth-semester students from a single institution limiting generalizability, potential bias from self-reported data, and the cross-sectional design preventing examination of developmental trajectories. Future research should employ longitudinal designs examining developmental progressions of academic reading proficiency, incorporate performance-based measures alongside self-reports, and conduct intervention studies testing targeted approaches for addressing significant challenges while exploring the emerging role of artificial intelligence tools in academic reading contexts and conducting cross-cultural comparative studies examining variations in reading challenges across linguistic and educational environments.

V. CONCLUSION

This study investigated the challenges faced by English Education Study Program students at Pattimura University when reading academic articles through a mixed-methods approach. The findings revealed a complex hierarchy of challenges, with linguistic difficulties—particularly complex sentence structures—presenting the most significant barriers, cognitive processing challenges centered on integrating new information with existing knowledge, and strategic processing difficulties. Reader factors, especially motivational sustainability with longer texts, exerted slightly greater influence than contextual factors on comprehension outcomes. Students employed diverse strategic approaches to navigate these challenges, including pre-reading orientation techniques, vocabulary support mechanisms, process-oriented approaches, and emerging technology-assisted strategies. However, collaborative reading remained underutilized despite its potential benefits. Identifying "strategic inertia"—students' reluctance to experiment with new approaches—represents a novel contribution to understanding how reading strategies develop and stabilize in academic contexts.

The findings carry significant implications for instructional approaches in higher education contexts. Pedagogical interventions should extend beyond vocabulary development, including explicit instruction in navigating complex sentence structures typical of academic discourse. Educational approaches should address mindsets that inhibit strategic flexibility while leveraging emerging technological tools to enhance comprehension. Moreover, the instructional focus should include techniques for engaging with challenging texts over extended periods. This study contributes to the literature by providing a comprehensive understanding of academic reading challenges among English Education students, suggesting that effective development of academic reading skills must simultaneously address multiple dimensions, including linguistic features, cognitive processes, strategic approaches, and affective factors. Future research should employ longitudinal designs examining developmental progressions of academic reading proficiency, explore the emerging role of artificial intelligence tools, and conduct cross-cultural comparative studies examining variations in reading challenges across linguistic and educational environments.

REFERENCES

- Alamri, A., & Ahmed, S. (2021). The Effectiveness Strategies for Students with Reading Challenges: New Frontiers. *İlköğretim Online*, 20(3). <https://doi.org/10.17051/ilkonline.2021.03.07>
- Al-Jarrah, H., & Ismail, N. S. B. (2018). Reading Comprehension Difficulties Among EFL Learners in Higher Learning Institutions. *International Journal of English Linguistics*, 8(7), 32. <https://doi.org/10.5539/ijel.v8n7p32>
- Amini, M., Zahabi, A., Amini, D., & Hosseini, S. S. A. (2020). A Review of Reading Strategies and Models in Learning and Teaching of English as a Foreign Language. *AJELP: The Asian Journal of English Language and Pedagogy*, 8(2), 14–26. <https://doi.org/10.37134/ajelp.vol8.2.2.2020>
- Belouiza, O., Er-Rechydy, A., & Koumachi, B. (2024). Prior knowledge Activation through the use of Effective Reading Strategies. *International Journal of English Literature and Social Sciences*, 9(3), 389–394. <https://doi.org/10.22161/ijels.93.49>
- Cabrera-Pommiez, M., Lara-Inostroza, F., & Puga-Larraín, J. (2021). Assessing academic reading in students entering Higher Education. *Ocnos. Revista de Estudios Sobre Lectura*, 20(3). https://doi.org/10.18239/ocnos_2021.20.3.2614
- Creswell, J. W., & Creswell, J. D. (2023). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches Sixth Edition* (6th ed.). Sage Publications.
- Dardjito, H., Rolls, N., Setiawan, A., & Sumekto, D. R. (2023). Challenges in reading English academic texts for non-English major students of an Indonesian university. *Studies in English Language and Education*, 10(3), 1290–1308. <https://doi.org/10.24815/siele.v10i3.29067>
- Duke, N. K., & Cartwright, K. B. (2021). The Science of Reading Progresses: Communicating Advances Beyond the Simple View of Reading. *Reading Research Quarterly*, 56(S1). <https://doi.org/10.1002/rrq.411>
- Garcia, G. D. V. (2023). Executive Functions and English Reading Comprehension among Filipino Students. *Reading Psychology*, 44(4), 388–411. <https://doi.org/10.1080/02702711.2022.2156950>
- Ghani, N., Jamian, A. R., & Abdul Jobar, N. (2022). Environmental Impact of Reading Literacy Development. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(4), e001425. <https://doi.org/10.47405/mjssh.v7i4.1425>
- Gough, P. B., & Tunmer, W. E. (1986). Decoding, Reading, and Reading Disability. *Remedial and Special Education*, 7(1), 6–10. <https://doi.org/10.1177/074193258600700104>
- Howard-Gosse, A., Bergey, B. W., & Deacon, S. H. (2024). The Reading Challenges, Strategies, and Habits of University Students With a History of Reading Difficulties and Their Relations to Academic Achievement. *Journal of Learning Disabilities*, 57(2), 91–105. <https://doi.org/10.1177/00222194231190678>
- Indriyani, G., & Pertiwi, I. S. (2021). Exploring the EFL Students' Reading Strategies Used on Reading Academic Articles. *PANYONARA: Journal of English Education*, 3(2), 71–79. <https://doi.org/10.19105/panyonara.v3i2.5008>
- Lawrence, J. F., Knoph, R., McIlraith, A., Kulesz, P. A., & Francis, D. J. (2022). Reading Comprehension and Academic Vocabulary: Exploring Relations of Item Features and Reading Proficiency. *Reading Research Quarterly*, 57(2), 669–690. <https://doi.org/10.1002/rrq.434>
- Magyar, A., Habók, A., & Molnár, G. (2022). Exploring the Role of English as a Foreign Language Receptive

- Skills and Learning Strategy Usage in the Ability to Acquire and Apply Knowledge at the Beginning of Higher Education. *Frontiers in Psychology*, 13, 808546. <https://doi.org/10.3389/fpsyg.2022.808546>
- McNeil, L. (2012). Extending the compensatory model of second language reading. *System*, 40(1), 64–76. <https://doi.org/10.1016/j.system.2012.01.011>
- Miyamoto, A., Pfoft, M., & Artelt, C. (2019). The Relationship Between Intrinsic Motivation and Reading Comprehension: Mediating Effects of Reading Amount and Metacognitive Knowledge of Strategy Use. *Scientific Studies of Reading*, 23(6), 445–460. <https://doi.org/10.1080/10888438.2019.1602836>
- Muryani, R. N., & Yunus, M. (2024). Students' Digital Vocabulary Learning: Experiences, Barriers, and Adaptive Strategies Exploration. *English Review: Journal of English Education*, 12(1), 31–42. <https://doi.org/10.25134/erjee.v12i1.9328>
- Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*, 22, 16094069231205789. <https://doi.org/10.1177/16094069231205789>
- Patty, J. (2023). Enhancing Reading Comprehension through the Cooperative Integrated Reading and Composition (CIRC) Strategy. *Research Horizon*, 3(4), 362–377.
- Pinzolit, R. F. J. (2023). AI in academia: An overview of selected tools and their areas of application. *MAP Education and Humanities*, 4(1), 37–50. <https://doi.org/10.53880/2744-2373.2023.4.37>
- Rhead, A. (2019). The trouble with academic reading: Exposing hidden threshold concepts through academic reading retreats. *Journal of Learning Development in Higher Education*, 15. <https://doi.org/10.47408/jldhe.v0i15.502>
- Siregar, N. R., Ilham, M., & M., M. (2020). The Influence of Survey, Question, Read, Recite, Review Method Toward Reading Comprehension Ability Mediated by Working Memory. *JPI (Jurnal Pendidikan Indonesia)*, 9(1), 85. <https://doi.org/10.23887/jpi-undiksha.v9i1.23101>
- Snow, C. E. (2018). Simple and Not-So-Simple Views of Reading. *Remedial and Special Education*, 39(5), 313–316. <https://doi.org/10.1177/0741932518770288>
- Stanovich, K. E. (1980). Toward an Interactive-Compensatory Model of Individual Differences in the Development of Reading Fluency. *Reading Research Quarterly*, 16(1), 32. <https://doi.org/10.2307/747348>
- Talwar, A., Magliano, J. P., Higgs, K., Santuzzi, A., Tonks, S., O'Reilly, T., & Sabatini, J. (2023). Early Academic Success in College: Examining the Contributions of Reading Literacy Skills, Metacognitive Reading Strategies, and Reading Motivation. *Journal of College Reading and Learning*, 53(1), 58–87. <https://doi.org/10.1080/10790195.2022.2137069>
- Uccelli, P., Galloway, E. P., Barr, C. D., Meneses, A., & Dobbs, C. L. (2015). Beyond Vocabulary: Exploring Cross-Disciplinary Academic-Language Proficiency and Its Association With Reading Comprehension. *Reading Research Quarterly*, 50(3), 337–356. <https://doi.org/10.1002/rrq.104>
- Urrutia, M., Mariángel, S., Pino, E. J., Guevara, P., Torres-Ocampo, K., Troncoso-Seguel, M., Bustos, C., & Marrero, H. (2024). Impact of Affective and Cognitive Variables on University Student Reading Comprehension. *Education Sciences*, 14(6), 554. <https://doi.org/10.3390/educsci14060554>
- Van Amelsvoort, M. (2024). Annotation for Developing Strategic Readers. *JALT Postconference Publication*, 2023(1), 65–70. <https://doi.org/10.37546/JALTPCP2023-08>
- Yung, C., Chin, P., Ban, T., & Em, S. (2024). Using different techniques and strategies to improve English reading skills: A review of literature. *Cambodian Journal of Educational and Social Sciences (CJESS)*, 1(1), 37–48. <https://doi.org/10.69496/cjess.v1i1.13>