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## “I am worried about the quality of my work...” EFL students’ voices on critical thinking skills

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### Abstract

Writing a thesis is a complex academic process that requires strong critical thinking skills. Consequently, many graduate students struggle to apply critical thinking during thesis writing. This study aims to explore EFL graduate students’ challenges and strategies in developing critical thinking skills in writing theses at Universitas Jambi. A qualitative case study design was employed, involving semi-structured interviews with four Master of English Education students who met the study’s inclusion criteria. The findings reveal three major categories of challenges: personal competence challenges (time management and workload balance), linguistic challenges (structuring and grammar, English proficiency, and source management), and psychological challenges (low motivation, lack of confidence, and writing anxiety). To address these challenges, students employed various strategies, including technological support such as AI and writing tools, time management practices, citation and resource management, and writing practice supported by supervisors and peers.

### Keywords

Case study, challenges, critical thinking skills, EFL graduate students, strategies, writing thesis

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## Introduction

In higher education, students acquire many skills according to their major; however, critical thinking skills are arguably the most important. According to [Lismaya \(2019\)](#), critical thinking is a cognitive process of conceptualizing, applying, synthesizing, and evaluating information obtained from observation, experience, reflection, thought, and communication as a basis for belief and action. Moreover, universities foster students' development of critical thinking. This notion is supported by [Bali \(2015\)](#), whose research showed that higher education institutions play a significant role in developing students' critical thinking skills through various pedagogical approaches and curriculum designs. Additionally, critical thinking helps students develop a questioning mindset, which is essential for academic inquiry and intellectual growth ([Duron et al., 2019](#)). Therefore, critical thinking plays a significant role in higher education because it is needed to develop students' mindsets and intellectual growth.

Besides the importance of critical thinking in higher education, universities often develop students' critical thinking skills through academic writing. Academic writing is the ability to process the argumentation in the form of an essay, a journal article, or a thesis. It is in line with [Vyncke \(2012\)](#), who states that when critical thinking is applied to academic writing, the abilities are expressed through the argumentation process, resulting in an argumentation, namely the essay, and the thesis or dissertation. Rigid analysis, logical argumentation, and the synthesis of complex ideas are essential components of academic writing. It means that academic writing involves questioning assumptions, evaluating evidence, and constructing coherent arguments. So, the students can develop nuanced perspectives and contribute original thoughts to their writing.

Although academic writing takes many forms, a thesis is one of them, and it is a crucial writing assignment for students, especially graduate students. Writing a thesis requires a high level of critical thinking, as it involves conducting in-depth research, synthesizing information, and presenting original ideas. It requires students to critically evaluate existing literature, identify research gaps, and develop a clear research question or hypothesis. According to [Hyland \(2013\)](#), "critical thinking is essential in academic writing as it enables students to engage with and contribute to scholarly conversations." Additionally, it is essential for analyzing data, interpreting results, and drawing valid conclusions. Moreover, the argument presented in the thesis must be cohesive and coherent. In line with [Paltridge \(2002\)](#), he emphasizes that "thesis writing is a complex process that demands students integrate various academic skills and knowledge to produce a cohesive and comprehensive argument." Thus, writing a thesis is a complex process that requires effort and critical thinking skills.

Writing a thesis is not easy because it is a complex process that requires critical thinking skills. Thus, many students face challenges in writing a thesis, one of which is developing critical thinking during the writing process. Aligning with [Egege and Kutieleh's \(2004\)](#) findings, participants experienced difficulties expressing their critical thinking in academic writing, including a lack of argumentation, clarity, and criticality, as well as an overreliance on description. Furthermore, [Samanhudi and Linse \(2019\)](#) stated that their research identified four important factors that hinder the manifestation of students' critical thinking in their writing: lack of clarity of ideas, lack of critical analysis, lack of critical evaluation, and lack of

precision. Additionally, these challenges can lead to a lack of coherence and logical flow in the thesis, making it difficult for readers to follow the argument. As a result, students often struggle to present a well-structured thesis.

Based on the challenges addressed earlier, there is a research gap in understanding the challenges and strategies for developing and applying critical thinking skills in writing a thesis. More research is needed to explore these challenges and strategies, particularly in higher education in Indonesia. The literature addressing these issues is sparse, though a few studies have been conducted. For instance, [Wijayati and Lestari \(2021\)](#) assessed students' critical thinking in thesis writing, and [Thabran et al. \(2020\)](#) examined critical thinking skills in an undergraduate writing course at Universitas Jambi. Given this gap in literature, the researchers intend to conduct a study with a similar focus. Therefore, this paper seeks to discuss graduate students' challenges and strategies for developing critical thinking in writing theses at Universitas Jambi. This research provided us information with valuable insights into the specific difficulties students face and the strategies they use to overcome them. The problems of the study can be formulated into two aspects: 1) What challenges do EFL graduate students face in utilizing critical thinking skills when writing the thesis? 2) How do EFL graduate students overcome the challenges in utilizing critical thinking when writing the thesis?

## Literature Review

### *Critical thinking*

There are many definitions of critical thinking proposed by various scholars. Critical thinking is also known as a higher-order thinking skill in a university context ([Giselsson, 2020](#)). However, this definition is not in line with [Fisher and Scriven's \(1997\)](#) definition, which defines critical thinking as skilled and active interpretation and evaluation of observations, communications, information, and argumentation. Additionally, [Lismaya \(2019\)](#) defines critical thinking as a cognitive process of conceptualizing, applying, synthesizing, and evaluating information obtained from observation, experience, reflection, thought, and communication as a basis for belief and action. Therefore, critical thinking is the ability to process, conceptualize, apply, analyze, synthesize, and evaluate information.

While there are many definitions of critical thinking, there are also various theories related to it. Various scholars have proposed these theories; however, the researchers chose those proposed by [Ennis \(1996\)](#) and [Paul and Elder \(2006\)](#). [Paul and Elder's \(2006\)](#) theories are chosen because they focus on strategizing to enhance critical thinking. Furthermore, the theories are used to foster one's critical thinking through the process of thinking. On the other hand, [Ennis's \(1996\)](#) critical thinking theories emphasize the use of critical thinking as a tool for evaluation.

### *Critical thinking in academic writing*

Critical thinking in academic writing is expressed through argumentation in essays, theses, journals, and reports. Argumentation is vital in academic writing because it represents the writer's original thoughts and showcases their critical thinking skills. So, students are

required to present arguments in their academic work to demonstrate their analytical abilities. Andrews (1995) and Scott (2000) suggest that argumentation is a key manifestation of critical thinking. Andrews (1995) further explains that argumentation results from engaging with diverse perspectives, evaluating sources, and incorporating compelling evidence to support the author's claims. Thus, argumentation involves confronting differing viewpoints and confirming or reconciling them. According to Loo (2020), learners should demonstrate their critical thinking skills by evaluating sources, constructing arguments, and synthesizing ideas in their academic writing. Thus, critical thinking in academic writing requires the ability to evaluate, analyze, and synthesize information and arguments using rational, valid, well-supported, and comprehensible reasoning.

Furthermore, the relationship between academic writing and critical thinking is inseparable, as critical thinking skills help students produce high-quality academic papers. It aligns with Pramonojati (2020), who stated that academic writing and critical thinking are closely related and that scholarly writing ability indicates that students have mastered the critical thinking skills necessary to succeed in a university environment.

### ***Challenges in developing critical thinking in writing a thesis***

The researchers reviewed several articles on challenges in critical thinking and writing published within the last 10 years to maintain relevance. From the reviewed articles, the researchers gathered results from studies addressing challenges in developing critical thinking in thesis writing. These challenges are categorized into three categories: psychological, personal, and linguistic.

***Psychological challenges*** arise from students' cognitive and mental processing. Psychological challenges, according to Shaughnessy (1977), are factors that come from motivation, perceptions, thought patterns, emotions, and cognitive development. These challenges can significantly affect a student's critical thinking ability in writing an academic paper. The articles address these challenges, which include a lack of learning motivation and writing anxiety. Furthermore, procrastination and poor time management due to these challenges can lead to increased anxiety and decreased self-efficacy. Therefore, addressing psychological challenges is important to prevent difficulties in developing critical thinking ability.

***Personal challenges*** stem from individual attributes, skills, and characteristics. In addition, personal challenges influence an individual's ability to perform a task, including writing a thesis. Furthermore, the challenges can hinder students' development of critical thinking when writing a thesis. Previous research reveals that some challenges that arise from individual struggles include a lack of subject knowledge, a lack of reading, a lack of essay structuring, and an authorial voice.

***Linguistic Challenges*** are challenges related to language proficiency and the structure of a language or grammar. From the articles reviewed, two major challenges students face in linguistics were identified as a lack of English proficiency and grammatical errors. These challenges contribute to students' critical thinking in academic writing.

### *Strategies for developing critical thinking when writing a thesis*

The researchers also reviewed relevant studies on strategies for developing critical thinking and writing a thesis. Few articles discuss it, and researchers have found that feedback, writing practice, and critical reading play a role. These strategies are explained below.

**Role of feedback**, in the review of strategies for developing critical thinking in thesis writing, a few articles noted that feedback is significant for students to develop their critical thinking. In Forbes' (2018) study, feedback is significant in the development of first-year undergraduates' critical thinking skills. He emphasizes that feedback, particularly formative feedback, is essential for guiding students in refining their critical thinking skills. Forbes (2018) argues that feedback should be constructive, specific, and timely to be effective. Moreover, Forbes points out that feedback should encourage students to reflect on their thought processes and challenge their assumptions, thereby promoting a more critical and reflective approach to learning.

Another study by Tathahira (2020) identifies feedback as an important element in developing students' critical thinking in an online setting. Tathahira notes that online feedback can take various forms, including written comments, audio feedback, and interactive discussions, all of which can significantly impact students' critical thinking development. Additionally, Tathahira emphasizes the importance of timely feedback in maintaining student engagement and motivation. Thus, feedback is significant for students because it can motivate them and help them think more critically.

**Writing practices**, the researchers also reviewed an article that highlights the importance of writing practice for improving students' critical thinking and academic writing abilities. For instance, Al-Shredi et al. (2022) examine the importance of critical thinking for students' academic success. The study reveals that students who actively incorporate critical thinking into their writing processes tend to achieve higher academic success. This advantage is largely due to their improved capability to construct coherent arguments and critical engagement with diverse sources. Moreover, through structured writing exercises, students learn to organize their thoughts, construct coherent arguments, and critically engage with source materials.

**Read critically**, a study by Pramonojati (2020) emphasizes the critical thinking skills students need to write the background section of research papers effectively. The author examines how students engage in synthesizing information, recognizing deficiencies in current literature, and expressing the importance of their research subjects. Based on the study's findings, Pramonojati (2020) suggests a structured approach to literature review, emphasizing the importance of critically evaluating sources and synthesizing information to address a well-defined research gap. Techniques like questioning assumptions and analyzing the validity of sources are recommended.

### **Methodology**

The present research aims to explore graduate students' challenges and strategies in utilizing critical thinking skills in thesis writing at Universitas Jambi. To achieve this, the

researchers used a qualitative research method to understand participants' experiences. Moreover, the data collected in the present study are expected to be presented in the form of words, sentences, or stories. According to [Creswell and Creswell \(2019\)](#), qualitative research is a method for investigating and understanding the meanings individuals or groups assign to a social or human problem.

### *Research design, site, and participants*

Additionally, the researchers employed a case study approach because the problem under investigation pertained to a single case within the Master of English Education program at Universitas Jambi. A case study is a qualitative research approach that requires the researcher to investigate a single or multiple cases in real life. Those cases are gathered through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports) ([Creswell & Creswell, 2019](#)). The present research employs a case study approach to gain in-depth insights, particularly into graduate students' challenges and strategies for developing critical thinking skills in thesis writing at Universitas Jambi.

Moreover, the case study approach is well-suited to the present research because it allows for an in-depth exploration of the complex, context-specific experiences of a particular set of participants. The present research can comprehensively investigate their unique challenges and strategies in applying critical thinking to their thesis writing process. A case study allows the collection of comprehensive, nuanced data through qualitative methods such as interviews, observations, and document analysis, facilitating the identification of patterns, themes, and insights that may not be revealed by alternative research methodologies.

The setting of this research was the Master of English Education Program at Universitas Jambi in the academic year 2024/2025. The participants are Master of English Education students from the 2023 batch who have written a thesis proposal. Furthermore, the data for this research are derived from participants' experiences developing critical thinking while writing their theses, which were captured through audio recordings.

The researchers used purposive sampling to select participants for this research. [Haryanto \(2020\)](#) argued that purposive sampling is a process of selecting a sample with specific considerations and criteria to make the information obtained later more representative. So, the researchers can select and recruit participants for this research according to the criteria they set. The total number of participants in this research is determined by the willingness of students in the Master of English Education program at Universitas Jambi in the academic year 2024/2025. Consequently, the researchers established the following criteria for participants: The third-semester students majoring in the Master of English Education at Universitas Jambi, Active students who have written a thesis, especially those who completed chapter 1, and Students who are willing to participate in this research. Participants selected must complete a consent form; 1-10 students who meet the criteria will be selected. 1-10 participants are selected because they are in line with [Creswell and Creswell's \(2019\)](#) qualitative research sample guidelines, particularly for case studies.

### *Data collection and analysis*

The researchers used interviews as a research instrument to collect data because they can help achieve the research's purpose. Furthermore, qualitative research widely employs interviews to gather detailed data. According to [Haryanto \(2020\)](#), two parties conduct interviews: the interviewer, who poses questions, and the interviewee, who responds. In principle, interview design and question preparation aim to elicit more in-depth information from relevant sources, such as opinions, impressions, thoughts, and experiences. Furthermore, there are three types of interviews: structured, semi-structured, and unstructured. For this research, the researchers conducted semi-structured interviews, which are interviews guided by a topic-based framework that allows more flexible questioning ([Haryanto, 2020](#)). Therefore, researchers used semi-structured interviews to prepare and refine questions based on participants' responses.

Each participant was interviewed individually, face-to-face, and in real time. The entire interview process is recorded in video and audio. The recording devices are the researchers' laptop and smartphone. Each interview lasts 20 to 60 minutes. Participants were allowed to answer the questions in Indonesian or English. They can choose their preferred language, so they feel comfortable and can talk freely about their experiences. Besides, using the preferred language can help the researchers obtain more detailed data from participants. After the interview, the researchers made the transcription.

Furthermore, the researchers used an interview protocol to guide the interview process. The interview protocol was developed by considering [Ennis and Fiken's \(1996\)](#) and [Paul and Elder's \(2006\)](#) theories and some previous research that was reviewed, such as [Forbes \(2018\)](#); [Islamiyah \(2020\)](#); [Mehta and Al-Mahrouqi \(2014\)](#); [Pramonojati \(2020\)](#); [Prasiska and Tohamba \(2021\)](#); [Samanhudi and Linse \(2019\)](#); [Tathahira \(2020\)](#); [Thabran et al. \(2022\)](#); [Wahyuningsih \(2018\)](#); and [Vyncke \(2012\)](#). The interview protocol was designed with the expectation that the questions asked would provide answers relevant to the research questions.

### *Data analysis*

The data used in this research were from interviews. So, the researchers used thematic analysis. Thematic analysis is a method for analyzing data by identifying patterns and themes in collected data ([Braun & Clarke, 2006](#)). In addition, thematic analysis is one of the foundations of qualitative research ([Fereday, 2006](#)). According to [Braun and Clarke \(2006\)](#), there are six steps in thematic analysis: familiarization, data coding, generating themes, reviewing themes, defining and naming themes, and drafting. In the first step of thematic analysis, the researchers familiarize themselves with the data by listening to the audio recordings, generating a transcription, and reading it through until they are familiar with it. Then, the researchers wrote an initial code for the data. In this step, the researchers highlight and note the important lines of the transcription. The next step is to find themes that represent the coded data. The researchers combined several coded data sets into a single theme. After that, the researchers review the themes and ensure they accurately represent the data. Then, the researchers interpret the name of each theme based on data interpretation.

## Findings

### *Challenges faced by EFL students in utilizing critical thinking skills in their theses*

The researchers have analyzed the data, and the findings reveal a range of interconnected challenges EFL students face in using critical thinking skills during their thesis writing process. These challenges fall into three major themes: personal competence, psychological, and linguistic.

**Table 1.** *Participants' challenge themes and sub-themes*

No.	Themes	Sub Themes
1.	Personal Competence Challenges	Time management Balancing workload
2.	Linguistic Challenges	Structuring and Grammar Lack of English Proficiency Finding and managing sources
3.	Psychological Challenges	Low motivation Lack of self-confidence Writing Anxiety

### *Personal competence challenges*

**Time management:** A recurrent theme among participants was the difficulty of managing time effectively while juggling multiple responsibilities. Students highlighted the overwhelming nature of balancing academic commitments, professional duties, and personal obligations. For instance, one participant stated,

“I find it very difficult to manage my time for writing my thesis because I currently have many responsibilities, both at work and in the community, as well as household tasks.” (P4)

Another participant (P3) emphasized the challenge of avoiding procrastination and staying focused amidst competing priorities. Participants identified these time management issues as a significant barrier to consistent progress in thesis writing.

**Balancing workload:** Beyond time management, students found it challenging to balance their thesis workload with other academic demands, such as assignments and projects from their current courses. The simultaneous burden of coursework and thesis writing frequently resulted in feelings of overwhelm, which further hindered task completion. As revealed by one participant,

“Balancing my thesis work with projects from my other courses this semester” (P1)

### *Psychological challenges*

**Lack of motivation:** Several participants reported difficulty maintaining motivation throughout the thesis process. The long and demanding nature of thesis writing led to periods of disengagement and reluctance to continue. One student remarked,

“My main motivation comes from my interest in the topic and the desire to complete my degree. However, it can feel discouraging at times, especially when I hit roadblocks.” (P3)

This sentiment underscores how external and internal factors influence students’ ability to sustain their enthusiasm and focus.

**Writing anxiety:** Anxiety regarding the quality of work and adherence to academic standards was another significant concern. Participants frequently mentioned feelings of apprehension about whether their writing met the expectations for a master’s-level thesis. For example, one participant shared,

“I am worried about the quality of my work and if it’s meeting academic standards.” (P3)

This anxiety often escalated as deadlines approached or when students encountered writer’s block. As confirmed by one participant,

“My feelings are mixed. There are times when I’m very excited because I discover new insights, but there are also times when I feel overwhelmed and anxious, especially when deadlines approach or when I’m stuck in writing” (P2).

**Lack of Confidence:** A notable psychological barrier was students’ lack of confidence in their writing abilities. Some participants doubted their capacity to express ideas clearly and effectively, leading to overthinking and second-guessing their work. As one participant noted,

“I lack confidence in my writing abilities and often overthink whether my writing is good enough for a master’s level thesis.” (P2)

### *Linguistic challenges*

**Structuring and grammar:** Maintaining a logical flow and consistent tone in writing proved challenging for many students. Issues such as sentence structure, paragraph transitions, and overly complex language were frequently cited. For example, one participant (P4) stated,

“I find it very difficult to structure sentences in a concise and organized way that makes them easy for readers to understand.”

Furthermore, frequent grammatical errors and limited academic vocabulary were reported as hindrances to clarity and coherence in their writing. As mentioned by one participant,

“I struggle to vary my vocabulary and make my ideas concise, which impacts the flow of my work.” (P3)

Another participant (P2) also mentioned that insufficient vocabulary makes transitions between paragraphs more challenging.

**Finding and Managing Sources:** Students encountered difficulties in locating high-quality, relevant sources and integrating them into their arguments. One participant highlighted the struggle to find sources that aligned closely with their thesis topic, while another emphasized the challenge of maintaining consistency in citation style and format. As revealed by one participant,

“Sometimes it's difficult to find research that truly fits the topic.” (P2)

**Lack of English proficiency:** Despite their backgrounds in English studies, some participants acknowledged ongoing challenges with academic English, particularly in constructing advanced arguments and employing appropriate academic language. One participant said that,

“Even though I'm an English student, I sometimes still struggle with academic writing in English.” (P2)

***Strategies to overcome students' challenges in utilizing critical thinking skills in their theses***

To navigate these challenges, students employed various strategies, ranging from leveraging technological tools to adopting personalized time management and writing practices. These strategies demonstrate students' proactive efforts to enhance their critical thinking and thesis-writing capabilities.

**Table 2.** *Participants strategy's themes and sub-themes*

	Themes	Sub-themes
Participants' strategies	Technological Support	Artificial Intelligence (AI) Writing Tools
	Time Management	Setting goals and deadlines Task Prioritization
	Citation and Resource Management	Evaluating Sources Reading Relevant Literature
	Writing Practice and Support System	Skill Development Seeking Support

### *Technological support*

**AI tools:** Many students used AI tools to supplement their writing process. For example, ChatGPT was used to generate ideas and refine sentences, while tools like Perplexity AI and paraphrasing software were used to find sources and ensure clarity. One participant stated,

“I sometimes use AI tools to help with grammar checking or to rephrase sentences. I use it to double-check clarity and grammar, but I make sure it aligns with my own ideas and voice.” (P3)

These tools were particularly valuable for overcoming linguistic barriers and enhancing writing precision. One participant (P1) also confirmed that he used ChatGPT to help him with his thesis, since this app provides detailed prompts for what he needs and then generates responses to refine his writing.

**Writing tools:** Reference management software, such as Zotero and Mendeley, played a crucial role in helping students organize their sources and citations systematically. Additionally, academic databases such as Google Scholar were widely used to access high-quality materials. As revealed by one participant,

“I use reference management software like Zotero to organize my sources, which helps a lot in keeping my references structured. I also use Google Scholar and academic databases for finding high-quality sources.” (P3)

### *Time management*

**Goal setting and deadlines:** Students adopted strategies such as setting smaller, manageable goals and creating detailed timelines to ensure steady progress. One participant explained,

“My strategy is to break down the writing process into manageable tasks and set small deadlines to keep myself on track.” (P3)

This approach helped mitigate the overwhelming nature of the thesis process by providing clear milestones to work toward.

**Task prioritization:** Another key strategy was prioritizing tasks based on their urgency and deadlines. By tackling assignments one at a time, students were better able to focus and reduce feelings of being overwhelmed. One participant (P4) said he prioritized all tasks individually according to their earlier deadlines.

### *Citation and resource management*

**Evaluating sources:** Students emphasized the importance of critically evaluating the credibility and relevance of sources. One participant noted,

“I prioritize peer-reviewed journals, academic books, and reputable organizations when selecting references.” (P4)

Other participants (P1, P2, P3) also supported this opinion by mentioning that,

“To analyse reference sources, I usually pay attention to several aspects, such as the credibility of journals or publications, publication year (especially for AI topics, I try to use references from the last 5 years), research methodology, and relevance to my topic” (P2)

This practice ensured the quality and reliability of the information used in their theses.

**Reading relevant literature:** Regularly reading journal articles and academic texts related to their topics was another strategy to enhance understanding and support their arguments. This practice also contributed to building a stronger foundation for critical thinking. As mentioned by almost all participants, they read relevant articles to support their writing.

“I read many journals about AI in education, academic writing, and the use of technology in language learning. My main sources are from databases like Google Scholar, Research Gate,” (P2)

### **Writing practice and support**

**Skill development:** Consistent practice in writing and reading academic texts was considered essential for improving both critical thinking and language proficiency. One participant shared,

“I practiced writing and reading because of lecture tasks, and it helped me improve my skills.” (P4)

Another participant (P3) said that regular practice in reading academic articles and writing helps her improve her skills over time.

**Seeking support:** Collaboration with supervisors and peers played a pivotal role in helping students overcome challenges. Regular feedback and guidance provided by supervisors helped students refine their ideas and build confidence in their writing. Peers, on the other hand, served as a source of emotional support and practical advice. As revealed by participants,

“I ask for help from my supervisor and sometimes friends who are also working on their theses.” (P3)

One participant confirmed that he received intensive guidance from his supervisor and used technological support to write. As stated in the following excerpt,

“I definitely have regular consultations with my supervisor and use AI tools to help” (P2)

## Discussion

The findings of this study highlight the challenges EFL students face in applying critical thinking skills when writing their theses, aligning with themes identified in the literature while also offering context-specific insights from Universitas Jambi. These challenges—categorized as personal, linguistic, and psychological—are not isolated; rather, they interact dynamically and shape how students engage with complex academic writing tasks. In addition, this study reveals how emerging strategies, particularly the use of technology and support systems, mediate these challenges and influence students' critical thinking development.

### *Personal challenges and the sustainability of critical thinking engagement*

Personal challenges, particularly time management and workload balancing, align with prior findings that emphasize the cognitive burden caused by competing academic and non-academic responsibilities (Shaughnessy, 1977). Participants indicated that insufficient time often hindered crucial phases of critical thinking, including extended reading, contemplation, and revision. As a result, students tended to prioritize task completion over analytical depth, reducing opportunities for higher-order thinking.

Beyond confirming earlier studies, this research adds depth by showing how workload pressure intensifies procrastination and weakens sustained focus. Consistent with Samanhudi and Linse (2019), students experiencing overlapping academic demands struggled to maintain coherence in argument development. This suggests that critical thinking is not merely an individual cognitive skill but one that depends heavily on structural and temporal conditions within graduate programs. Moreover, this study highlights the institutional dimension of personal challenges. Inadequate alignment between coursework demands and thesis milestones constrained students' capacity to engage in iterative critical thinking processes. This finding echoes Creswell and Creswell's (2019) argument that academic environments significantly influence research quality, underscoring the need for institutional policies that support balanced academic workloads.

### *Linguistic challenges and the expression of analytical reasoning*

Linguistic challenges—particularly in organizing arguments, maintaining grammatical accuracy, and employing academic vocabulary—support earlier findings that language proficiency strongly affects students' ability to express critical thinking (Egege & Kutieleh, 2004; Samanhudi & Linse, 2019). Even when students demonstrated conceptual understanding, limited linguistic resources constrained their ability to articulate evaluation and synthesis effectively.

This study further extends existing literature by identifying source management as a combined linguistic and cognitive challenge. Difficulties in integrating, paraphrasing, and evaluating sources often resulted in descriptive rather than analytical writing. These findings align with Hyland's (2013) view that academic writing competence is inseparable from disciplinary discourse knowledge and source-based argumentation skills. Additionally, the

findings suggest that linguistic challenges may mask students' actual critical thinking abilities. Students with limited academic English proficiency reported difficulty presenting nuanced arguments, which may lead supervisors to underestimate their analytical competence. This supports Vyncke's (2012) assertion that critical thinking assessment in academic writing must consider linguistic mediation, especially in EFL contexts.

### *Psychological challenges and students' willingness to think critically*

Psychological challenges—such as writing anxiety, lack of self-confidence, and fluctuating motivation—are consistent with prior research highlighting affective barriers in academic writing (Abd Rahim et al., 2016). Participants' fear of not meeting academic standards often led to excessive self-monitoring and hesitation, inhibiting the development of original and critical arguments. This study deepens existing findings by showing that psychological distress directly limits students' willingness to take intellectual risks, a core element of critical thinking. As Vyncke (2012) argues, critical thinking requires the courage to question assumptions and propose alternative interpretations—actions that anxious students tend to avoid.

Furthermore, the findings reaffirm Shaughnessy's (1977) position that emotional and cognitive dimensions of writing are inseparable. Students who lacked confidence were more likely to rely heavily on sources without critical evaluation, reinforcing descriptive tendencies. This suggests that psychological readiness should be considered a foundational condition for the development of critical thinking in thesis writing.

### *Strategic mediation through technology and academic support systems*

The strategies adopted by participants—including the use of AI tools, self-management practices, and academic support systems—align with the existing literature, which emphasizes feedback and guided practice in the development of critical thinking (Forbes, 2018; Tathahira, 2020). Supervisor and peer feedback provided scaffolding that helped students refine arguments, validate interpretations, and maintain motivation during challenging writing phases. Notably, this study highlights the growing role of AI tools such as ChatGPT and Perplexity AI in mediating linguistic and cognitive challenges. While previous studies emphasized structured writing practice (Al-Shredi et al., 2022), this research demonstrates how technology supports idea generation, language clarity, and source exploration. These tools enabled students to engage more actively with analytical tasks when used reflectively. The results indicate that technology ought to serve as a cognitive aid rather than a replacement for independent reasoning. Consistent with Pramonojati (2020), critical reading and source evaluation remain essential for developing genuine critical thinking. Therefore, institutions should provide explicit guidance on ethical and pedagogical uses of AI to ensure that technology enhances students' analytical autonomy.

## Conclusions

This study examined the challenges and strategies EFL graduate students face in applying critical thinking skills during thesis writing at Universitas Jambi. The findings reveal interconnected personal, linguistic, and psychological challenges shape students' development of critical thinking. Difficulties with time management and balancing academic responsibilities often limit students' ability to engage deeply with their writing tasks. Linguistic issues, such as organizing ideas coherently, maintaining grammatical accuracy, and managing academic sources, further constrained the effective expression of critical thinking. In addition, psychological factors—including writing anxiety, low motivation, and lack of confidence—frequently disrupted students' consistency and focus throughout the thesis-writing process.

Despite these challenges, the participants demonstrated purposeful efforts to overcome obstacles by adopting various strategies. Technological tools, particularly AI-based applications and reference management software, helped students improve language accuracy, refine ideas, and organize sources. Effective time management practices, critical reading of relevant literature, continuous writing practice, and careful evaluation of academic sources also played an important role in strengthening students' critical thinking skills. Moreover, guidance and feedback from supervisors and significantly enhanced students' confidence and reflective thinking. Overall, this study highlights that critical thinking in thesis writing is not only a cognitive process but also one influenced by emotional and contextual factors. Therefore, universities are encouraged to provide structured academic writing support, critical reading training, and responsible guidance on AI use to better support EFL graduate students' development of critical thinking.

This study reveals that EFL graduate students at Universitas Jambi face various challenges in utilizing critical thinking skills during thesis writing. These challenges fall into three main categories: personal, linguistic, and psychological challenges. Personal competence challenges, such as time management and balancing workloads, linguistic difficulties, like structuring arguments and managing grammar, and psychological obstacles, such as writing anxiety and lack of confidence, collectively hinder students' ability to apply critical thinking effectively. To address these challenges, students employed strategies such as leveraging AI tools, improving time management, critically evaluating sources, and seeking support from supervisors and peers.

The reliance on AI tools like ChatGPT and Perplexity AI raises concerns about their impact on the development of critical thinking. While they effectively enhance grammar and coherence, overdependence could undermine students' ability to independently evaluate and synthesize information—a foundational element of critical thinking. Moreover, the study primarily focuses on students' experiences, without addressing systemic factors such as curriculum design or faculty training in critical thinking instruction. Future research should investigate the role of institutional frameworks in fostering critical thinking skills and the responsible integration of AI.

## Disclosure Statement

No potential conflict of interest was reported by the authors.

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