



Exploring Generative AI Tools in Supporting Indonesian EFL Graduate Students' Self-Regulated Learning Strategies in Academic Writing

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Article Info	Abstract
Received: 2026-07-08 Revised: 2026-08-28 Accepted: 2026-09-10 Keywords: <i>Academic writing; EFL Graduate Students; Generative Artificial Intelligence; Self-Regulated Learning Strategies.</i> DOI: 10.24256/ideas.v14i2. 11727 Corresponding Author: Evanda Aradea Rizky evandaaradea.2024@student.uny.ac.id Magister Pendidikan Bahasa Inggris, Universitas Negeri Yogyakarta	<i>Generative artificial intelligence (GenAI) has significantly reshaped educational landscape by delivering personalized learning resources. However, its influence on the development of Self-regulated learning (SRL) strategies among Indonesian EFL graduate students remains unexplored. This study aimed to explore the use of GenAI tools integration in supporting Indonesian EFL graduate students' self-regulated learning in academic writing. Building on Zimmerman's SRL model, this research investigated which GenAI tools students utilize, how these tools support SRL phases of forethought, performance, and self-reflection phase, as well as what attitude students hold toward the GenAI integration. A descriptive qualitative design was employed through semi-structured interview with four graduate students who enrolled in Thesis Proposal Writing coursework. Thematic analysis revealed three primarily theme: AI utilization, AI-strategic use, and attitude toward AI. The students in this study strategically combined a variety of GenAI tools, such as ChatGPT, Gemini, Perplexity, Quillbot, and Grammarly, in accordance with their needs of each SRL phase: in the forethought phase, GenAI tools served as an interactive digital peer for brainstorming and outlining, in the performance phase GenAI assisted with drafting and refining sentence structure, and in the self-reflection phase GenAI provided linguistic and real time feedback. Through these phases, participants maintained a highly responsible, human-led approach, emphasizing that GenAI tools should function as interactive assistance to reduce cognitive load, while critical thinking and main authorship remain students' intellectual properties. This finding confirmed that GenAI contributes most effectively in self-regulated academic writing GenAI contributes most effectively to self-regulated academic writing when students maintain critical control, evaluative judgment, and ownership over their writing process, positioning GenAI as a supportive digital partner rather than a substitute for students' agency.</i>

1. Introduction

Academic writing plays an important role in higher education level, serving as the primary medium within varied disciplinary fields. In the English as Foreign Language (EFL) context, the ability to produce proficient academic writing in English has become increasingly indispensable, particularly among university students. They were required to master academic writing skill as it serves as a foundational skill to exploring writing instruction in higher education. Hyland (2003) defined academic writing as the ability to produce a clear, coherence, logical, structured writing, which serves not merely as a medium for communication but also as a skill that serves as a foundation of scholarly discourse. Mastery of academic writing enables students to understand various disciplinary standard and promote critical thinking, analytical reasoning, and effective argumentation (Ranali, 2021). As the result, the importance of academic writing goes beyond mere classroom assignments, serving as essential tools for students' future careers (Bailey, 2025).

In the English Language Learning at the university level, students are required to achieve mastery in academic writing, as they must to complete task, publishing scholarly articles. According to Hyland (2003), mastery of academic writing involves more than grammar and vocabulary, it requires the ability to structure arguments logically, synthesize information from various sources, develop critical thinking, and adhere to disciplinary conventions.

However, students, at both undergraduate and graduate level, frequently faced significant, multifaced difficulties om academic writing, centred on inappropriate word choice, grammatical errors, incoherent paragraph structure, as well as difficulties in developing and maintaining a coherent argument (Alzahrani, 2025; Aldabbus & Almansouri, 2022; Riadil et al., 2023). Furthermore, in graduate level, academic writing difficulties remain more nuanced and complex. In addition, at graduate level, while the common belief that graduate students possess high proficiency in writing, the difficulties faced by graduate students remain more nuanced and complex, as the demand of academic writing which require precise language, logical organization, and in-depth analysis, frequently face difficulties regarding source integration or citation, paraphrasing, and critical thinking . (Ho, 2024)

In the Indonesian context, these difficulties are further compound by a on the first language reliance in formulating ideas, as well as psychological factors, such as writing anxiety and low self-confidence (Alinda et al., 2024; Ningrum et al., 2023; . As academic writing extends beyond technical language like grammar and vocabulary, it requires structured organization, critical argumentation, and developing an independent scholarly voice, especially when tasked with writing theses or articles for international publications.

Academic writing is also often viewed as a challenging skill for students due to its cognitive complexity and strict requirements (Hyland, 2003). It involves various stages, including outlining, drafting, revising, and editing. As a result, success in academic writing depends on formal education, inherent talent, and a student's ability to self-regulate their cognition, motivation, and behavior throughout the writing process, highlighting the importance of effective writing strategies . Azizah et al., 2025; Hamdani & Abid, 2025)(Coffin et al., 2003)(Zimmerman, 1990; Zimmerman & Risemberg, 1997)

In this context, self-regulated learning (SRL) served as an effective framework for supporting graduate students' academic writing. . SRL involved students actively participating in their learning processes through metacognition, motivational, and behavioural strategies to achieve specific purpose . Students who implemented SRL strategies to plan, monitor, and evaluate their writing, demonstrating higher level of

independence, critical thinking, and creativity (Teng & Huang, 2019), as well as better writing performance, self-efficacy, and learning outcome .

Furthermore, this systematic management was illustrated by Zimmermans's (2002) cyclical model of SRL, which outlined three phases: forethought phase focuses on strategic planning and goal-setting prior to starting the writing process, performance phase focuses on executing the writing task while monitoring progress, and self-reflection phase evaluating outcomes and managing emotions that influence subsequent efforts. These SRL strategy domains significantly predict writing proficiency and correlate positively with high-quality outputs in foreign language education . The connection between these three cyclical phases and observable behavioural strategies domains are detailed in Tabel 1. (Teng & Huang, 2019)(Zimmerman, 2000)(Han et al., 2021; Skar et al., 2023; Teng & Zhang, 2016, 2020)(Rochmah, 2021; Teng & Zhang, 2016, 2020)

Table 1. Mapping of Phases and Categories of Self-Regulated Learning Strategies (Zimmerman, 2000, 2002; Zimmerman & Pons, 1986)

SRL Phases (Zimmerman , 2000, 2002)	Categories Strategies (Zimmerman & Pons, 1986)	Operational Definition in Academic Writing
Forethought phase	Goal setting and planning	Students establish writing goals or subgoals and create plans that outline the sequence, timing, and completion of tasks related to these writing objectives.
	Organizing and transforming	Student-initiated adjustments, whether visible or subtle, made to instructional materials to enhance writing skills.
	Seeking information	Student-initiated efforts to secure further writing task information from non-social sources when undertaking an assignment.
	Environmental structuring	Students are taking the initiative to choose or arrange their physical or digital workspaces to maximize focus and minimize distractions during the writing process.
Performance phase	Keeping records and monitoring	Student-led initiatives aimed at recording writing outcomes.
	Rehearsing and memorizing	Student-driven attempts to memorize information through either visible or subtle practice methods.
	Seeking social assistance	Student-driven initiatives to seek assistance from classmates.
	Reviewing records	Student-led initiatives to revisit and revise their writing.
Self-reflection phase	Self-evaluation	Student-led assessments of the quality or progress of their writing.
	Self-consequences	The organization of students can involve the conceptualization of rewards for achievements or consequences for shortcomings.

GenAI in EFL Academic Writing

The rise of GenAI has significantly transformed the landscape of ELF academic writing, particularly in higher education context, as universities increasingly embraced GenAI to facilitate personalized learning and independent research process . These GenAI tools are reshaping students' engagement by providing grammar correction, enhancing fluency, and providing real time feedback on writing mechanics and coherence . These potentials of GenAI to enhance learning experience as well as facilitate creative and research activities to a significant extent., as GenAI can assist students by providing real-time, individualized feedback, fostering autonomous learning, and streamlining research tasks such as literature reviews and data analysis .(Belkina et al., 2025; McDonald et al.,

2025; Sa'adan et al., 2024)(Alkamel & Alwagieh, 2024; Ou et al., 2024; Song & Song, 2023)(Guan et al., 2024; Jin et al., 2025)

In the Indonesian university context, students viewed GenAI tools as beneficial for enhancing or boosting their confidence and reduce writing anxiety during planning and drafting phase . However, the concern has been raised regarding the limitation of GenAI, particularly in GenAI's ability to maintain structural coherence and capture subtle nuance of academic writing (Utami et al., 2023). This indicated that while GenAI produces high-quality text, the outcome heavily relied on high critical thinking and human guidance . As the result, undergraduate writer adopted a self-regulatory approach, utilizing GenAI tools primarily for linguistic improvement, allowing them to maintain their own voice and avoid plagiarism issues .(Amani & Bisriyah, 2025; Hapsari & Rizky, 2025)(Wu & Lai, 2024)(Wulandari & Purnamaningwulan, 2024)

While recent studies highlight the benefits of Generative AI tools in higher education, numerous existing studies in the Indonesian EFL context primarily center on undergraduate students and their general perceptions of GenAI as a single, undifferentiated category of tool (Amani & Bisriyah, 2025; Hapsari & Rizky, 2025). The gap remains in understanding how graduate students use GenAI, but how different types of GenAI tools, ranging from generative conversational models, literature-synthesis engines, to language-correction tools, function differently across the cyclical phases of self-regulated learning. Addressing this gap, this research aims to explore how Indonesian EFL graduate students strategically integrate a range of GenAI tools throughout the forethought, performance, and self-reflection phases, examining how the specific function of each tool shifts according to the demands of each phase in academic writing.

This research is guided by the following research question: (1) What Generative AI tools do graduate students utilize for academic writing? (2) How do graduate students use Generative AI tools to support self-regulated academic writing during the forethought, performance, and self-reflection phase? And (3) What are graduate students' attitudes toward the use of Generative AI tools in self-regulated academic writing?

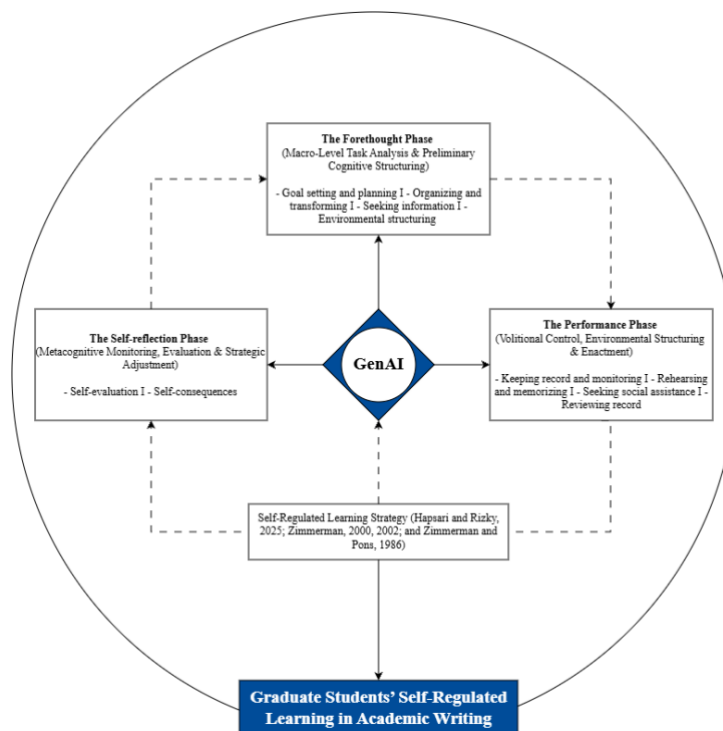


Figure 1. Conceptual Framework of Generative AI tool integration in Self-regulated Learning Strategies in Academic Writing.

This research adopted a conceptual framework that integrates Zimmerman's self-regulated learning (SRL) model as illustrated in Figure 1. Within this framework, GenAI functioned as a supportive digital peer across three SRL cyclical phase, in the forethought phase, GenAI tools served as support for goal setting, planning, and information seeking; in the performance phase, GenAI tools assisted with drafting, monitoring, and record-keeping; and in the self-reflections phase, GenAI tools support self-evaluation and feedback. This framework position GenAI not as a replacement for students' agency, but as a mediating tool, contributing to self-regulated learning depend on how students' strategically and critically engage with the GenAI tools across each phase in academic writing.

2. Method

Research Design

This study employed a descriptive qualitative design to explore in depth the role of generative AI tools in supporting EFL (English as a Foreign Language) graduate students in Indonesia with self-regulated learning, particularly within the context of academic writing. By utilizing this methodology, the researcher aims to gain a comprehensive and nuanced understanding of the phenomenon. A descriptive qualitative approach enables an in-depth examination of various elements, including the specific ways these AI tools are integrated into learning practices, the contexts of their use, and the situations that either facilitate or hinder their effectiveness. The study was conducted in one of University in Yogyakarta, Indonesia, focusing on the participants' self-regulated integration of GenAI tools within their academic writing process, specifically on the second-semester EFL graduate students, as they were in the process of writing their thesis.(Creswell, 2009).

Participants

The study involved four graduate students from the Department of English Language Education enrolled in Thesis Proposal Writing coursework. The relatively small number of participants (N=4) was a common and appropriate choice in descriptive qualitative study, as it emphasized the in-depth exploration of individual experiences rather than generalization (Creswell. 2009). The purposive sampling was utilized as the sampling method in this study. The participants selections ware based on the criterion of their active engagement with AI, was operationally defined as using at least two Generative AI tools, such as ChatGPT, Gemini, or Claude, during their academic writing task completion, at a minimum frequency of three times per week throughout the thesis proposal writing. This concrete operationalization ensured that the selected participants possessed a substantial level of hands-on experience and familiarity with AI-assisted writing, thereby enabling them to provide rich, reflective, and relevant insights into how AI technologies interact with their academic writing practices.

Then Participants were contacted via WhatsApp and interviewed over Zoom, with sessions recorded. As this study posed minimal risk to participants and did not involve sensitive or vulnerable populations, formal ethical clearance was not sought; however, written informed consent was obtained from all participants prior to data collection, and participants were assured of confidentiality through the use of pseudonyms, and participants were given pseudonyms, Anne, Bella, Catherine, and Dira, to protect their identities illustrated in Table 2.

Table 2. Participant Information

No	Participants	Age	Gender	Year of study
1.	Anne	26	Female	1 year
2.	Catherine	25	Female	1 year
3.	Dira	24	Female	1 year
4.	Bella	25	Female	1 year

Data Collection

The data were collected through interview guidelines regarding the integration of GenAI in supporting students' self-regulated learning in academic writing across Zimmerman's self-regulated learning strategies phase, adopted from Hapsari and Rizky (2025), consisting of 14 items to gain an in-depth exploration of their experiences as well as students' attitudes toward the integration of GenAI application in the writing process (See Table 3). Each interview was conducted for approximately 1 hour per participant. In addition, each interview session was recorded with permission to ensure accurate transcription later on.

To ensure the validity of the adapted research instrument suitability for writing a thesis proposal, the original protocol underwent a systematic process. First, the instrument items were translated into Indonesian and contextually adapted to accommodate the nuances of writing a graduate-level thesis proposal. Subsequently, validation was conducted by two senior lecturers in the field of English Language Education to assess the clarity and relevance of the items, as well as their alignment with Zimmerman's framework (Creswell & Creswell, 2018).

Table 3. Interview Guideline Adopted from Hapsari & Rizky (2025)

SRL Phases	Interview Question
General Perception of Academic Writing	- How do you usually approach your writing assignments? Can you describe your process? You can refer to your experience in the coursework you enrolled in the university (thesis proposal, scientific writing coursework, educational research, research instrument design, and analysis) - What motivates you to complete your academic writing tasks? Do you have any strategies to keep yourself focused? - How would you describe your confidence in your writing abilities (self-efficacy)? Do you believe this affects your writing performance?
The Use of AI to Support Self-Regulated Learning in Writing during Forethought Phase	What strategies do you use to plan and organize your writing before you start drafting? (e.g., brainstorming, outlining). What AI tools do you use to support your learning?
The Use of AI to Support Self-Regulated Learning in Writing during Performance Phase	How do you monitor your progress while writing? For instance, do you set specific goals or deadlines for yourself? What AI tools do you use to support your learning?

SRL Phases	Interview Question
The Use of AI to Support Self-Regulated Learning in Writing during Self-reflection Phase	- Do you have any techniques for revising your work after completing a draft? If so, what are they? What AI tools do you use to support your learning? - How do you deal with distractions or manage your environment when working on writing tasks? What AI tools do you use to support your learning?
	Can you describe any challenges you face in managing your time for writing assignments? How do you overcome them? What AI tools do you use to support your learning?
	- Do you seek feedback on your writing from others? If so, how do you use this feedback to improve? What AI tools do you use to support your process? - How do you evaluate the quality of your writing after completing a task? What standards do you use to assess it? What AI tools do you use to support your process?
Use of AI Tools in Forethought-Performance-Reflection Phase	How do you perceive the effectiveness of these AI tools in enhancing your writing skills?
	Do you think AI tools help you become a better self-regulated academic reader and writer? Why or why not?
	How do you balance using AI tools with your own writing strategies?
	What academic ethic should you consider in using AI to support your self-regulated learning in writing?

Data Analysis

To analyse the data, the thematic analysis was conducted to identify the pattern of theme emerge from the data as outlined by . The data were transcribed first with manual checks in accordance with the original Zoom recording for accuracy. The thematic analysis involved six phases: (1) familiarizing with the data, which involved repeated reading of the transcripts to gain a thorough understanding of the dataset; (2) generating initial codes, in which relevant data segments were systematically identified and labeled; (3) searching for themes, in which related codes were collated into candidate themes; (4) reviewing themes, in which candidate themes were checked against the coded data and the entire dataset to ensure internal coherence and clear distinctions between themes; (5) defining and naming themes, in which the essence and scope of each theme were clearly articulated; and (6) producing the report, in which the findings were synthesized into an analytic narrative supported by participant excerpts (Braun & Clarke, 2006). (Clarke & Braun, 2017)

Additionally, a hybrid approach was conducted to thematic analysis, combining deductive data template-driven analysis and inductive data driven coding. Deductively, Zimmerman's (2000) Self-Regulated Learning (SRL) framework provided a pre-established structural codebook based on its three primary phases: forethought, performance, and self-reflection. Inductively, an open coding method was employed to capture novel and

unexpected phenomena emerging directly from participants' responses, leading to the identification of specific sub-themes such as AI utilization, AI strategic use, and attitude toward AI. The primary analysis was conducted independently by the lead researcher.

Trustworthiness

To ensure the reliability of the qualitative data, various strategies were implemented following recognized standards in qualitative research (Creswell, 2011; pp. 191-192). The study ensured credibility through member checking, allowing participants to verify their interview responses. Transferability was achieved by offering detailed descriptions of participants and their context, enabling readers to evaluate the relevance of findings to similar settings. Dependability was upheld through systematic procedures in data collection, transcription, and coding, providing an audit trail for replication. Lastly, confirmability was established by maintaining researcher neutrality and practicing reflexivity to minimize bias, ensuring that findings were rooted in participants' responses.

3. Results

Thematic analysis revealed three main themes: (1) AI utilization, (2) AI-strategic use, (3) Perceived toward AI. Each theme involved a quote from the participants, offering insight into how Generative AI tools support self-regulated learning in academic writing.

Theme 1: AI Utilization

The first research question explored which AI tools Indonesian EFL graduate students used to support their self-regulated learning in academic writing. The findings described several AI tools used to support self-regulated learning in academic writing. The participants reported that they frequently mentioned several AI tools and effectively utilized AI tools, such as ChatGPT, Gemini, Claude, Perplexity, Quillbot, and Grammarly, based on their needs. These AI tools were used in almost every phase of self-regulated learning in academic writing illustrated in the Table 4.

Table 4. Mapping of SRL Phases, Strategies, and GenAI Tool Functions

SRL Phase	Participants' Strategies	AI Tools	Function	Participants
Forethought	Brainstorming and topic exploration	ChatGPT	Clarifying and exploring topics	Anne
Forethought	Literature mapping and drafting a general-to-specific outline	Perplexity & Gemini	Drafting outline	Catherine
Forethought	Breaking down the large tasks to avoid feeling overwhelm	ChatGPT	Providing guidance and initial ideas	Dira
Forethought	Structuring unorganized ideas	ChatGPT	Arranging the sequence of ideas	Bella
Performance	Drafting and writing development	ChatGPT, Perplexity, & Gemini	Clarifying the logic and the flow of writing	Anne and Catherine
Performance	Refinement of complex writing concept	ChatGPT & Claude	Generating ideas and explaining concept	Dira
Performance	Structuring ideas during drafting	ChatGPT	Organizing ideas in a draft	Bella
Self-reflection	Automatic grammar checking	Grammarly	Instant real time feedback	Anne

SRL Phase	Participants' Strategies	AI Tools	Function	Participants
Self-reflection	Revising the writing style and reducing repetition.	Grammarly, ChatGPT, & Quillbot	Grammar Correction and Paraphrasing	Catherine
Self-reflection	Feedback on the clarity and structure of the argument	ChatGPT & Claude	Identifying incorrect phrases and arguments	Dira
Self-reflection	Verification of the text against the rubric	ChatGPT	Double-check the consistency of the argument	Dira
Self-reflection	Refusing to upload drafts to AI	-	Data privacy concerns & allegations of plagiarism	Bella

The finding described how participants utilized AI tools to support their SRL in academic writing. The participants reported that to enhance their understanding of topics, they frequently utilized ChatGPT as a tool to help them in brainstorming and exploring ideas. However, Anne and Catherine reported that they combined multiple AI tools in their writing processes, Bella preferred a minimalist approach, while Dira used a balanced pair of conversational AI tools for real-time assistance.

Anne highlighted various AI tools, such as ChatGPT and Grammarly, for structural and mechanical writing assistance, including topic breakdown, idea generation, and instant grammar correction:

"Actually, I use AI to help me to break down my topic or to explain more. I often use ChatGPT, for example, to help me when I need to explore any ideas, for example, or maybe I use Grammarly to check my grammar or paraphrase the sentence to make it clear, yeah." (Anne/AU/57-60).

In addition, Dira frequently used AI as cognitive tools reduce procrastination and make larger tasks feel less overwhelming. Dira explains that the initial stage of writing can be overwhelming; she creates an outline as a strategic first step to provide a clear roadmap by using AI tools, such as ChatGPT, to generate ideas or provide initial guidance.

"The initial stage of writing often feels overwhelming, so I overcome this by breaking the task into smaller, more manageable steps, such as creating an outline before working on the full paper... When I feel stuck or unsure how to begin a section, I sometimes use AI tools like ChatGPT to generate ideas or provide initial guidance. This helps me get started more easily and makes the overall writing process feel less intimidating." (Dira/AI-SU/80-87).

Theme 2: AI-Strategic Use

To better understand the role of AI tools in self-regulated learning in academic writing, the following section analysed the findings across three phases: forethought, Performance, and self-reflection. This analysis identifies key areas where AI is most beneficial and highlights aspects where students exhibit varied perceptions

2.1 Forethought: Goal Setting, Planning, and Information Seeking

In the forethought phase, the participants' use of GenAI tools went beyond mere brainstorming, as it might appear at first glance, and instead reflected three distinct self-regulation strategies: goal setting, which establishing the direction of the writing, structural planning, which drafting and outline, and information seeking, which integrating AI tools with literature searches.

Catherine demonstrated the most explicit pattern, linking the search for journals on Google Scholar with the step-by-step outline drafting:

"So, brainstorming here, I always read several related journals on Google Scholar, actually, like our syntax pages, etc., related to the platform that provide the journals or articles. And then, after that, after looking for the related journal, I always write an outline of the material or topic in general to specific, like, you know, breaking down one by one general statement, then determining the thesis statement, like, describe my body paragraph, supporting paragraph. And then, from that, I can take the conclusion. And the tools I always use are ChatGPT, for example, and then Perplexity, and yeah, Gemini also." (Catherine/AI-SU/FP/42-52).

Dira utilized GenAI tools differently, not for information seeking, but as a strategy for emotional and behavioural regulation to overcome procrastination by breaking down large task into more manageable one:

"The initial stage of writing often feels overwhelming, so I overcome this by breaking the task into smaller, more manageable steps, such as creating an outline before working on the full paper... When I feel stuck or unsure how to begin a section, I sometimes use AI tools like ChatGPT to generate ideas or provide initial guidance. This helps me get started more easily and makes the overall writing process feel less intimidating." (Dira/AI-SU/FP/80-87).

Meanwhile, Bella utilized GenAI tools in a more limited capacity to compensate for her difficulties in formulation ideas, a pattern indicating that for Bella forethought is reactive (addressing specific weaknesses) rather than proactive (a planned strategy), as seen with Catherine and Dira.

"I usually just start right away, and once I know the direction of the writing, only then do I look for the necessary materials or topics... For papers such as journals or thesis proposals, I usually brainstorm ideas first before starting to write. As I'm not really good at arranging ideas... I sometimes use ChatGPT to organize my ideas" (Bella/AI-SU/FP/6-10).

These patterns indicated that the functions of GenAI tools during the forethought phase is varied, for Catherine, AI was part of a systematic research workflow, for Dira, GenAI tools served as motivation regulation, whereas for Bella, GenAI tools served as compensate for specific cognitive difficulties in formulating ideas.

2.2 Performance phase: AI-Assisted Writing Production vs. Self-Monitoring

During the performance phase, it was importance to distinguish between two aspect that often mixed in the finding. AI-assisted writing production, which means where AI helps generate text, structuring sentences and developing ideas, and genuine self-monitoring, where students actively evaluate their own writing progress. Most findings in this phase illustrate the first pattern: Anne and Catherine used ChatGPT, Perplexity, and Gemini to clarify their train of thought and ensure logical flow, while Dira used ChatGPT and Claude to refine complex concepts and generate new ideas. These patterns indicate that AI functioned as a production assistant rather than a self-monitoring.

"For example, ChatGPT that helps me to develop my ideas and how I should rewrite my sentence more clearly and something like that." (Anne/AI-SU/ PP/173-174).

Not all participants exhibited the same pattern. Bella remained consistent with her approach from the previous phase, using ChatGPT purely to organize her thoughts rather than to develop content, demonstrating a more limited and controlled use of AI compared to the other three participants.

2.3 Self-reflection: revision, evaluation, and feedback

In the self-reflection phase, participants reported that they utilized GenAI tools for grammar checking, paraphrasing, and refining ideas. Anne relied on Grammarly's rapid automated feedback for instant grammar corrections. Catherine extended her usage to the automated settings in Word and Google Docs for efficiency, while also employing ChatGPT and QuillBot to reduce sentence repetition. Dira demonstrated the most explicitly reflective approach, using Claude and ChatGPT to seek feedback on clarity and academic tone, yet consciously retaining the authority to make the final decision:

"When I finish a full draft, I usually read through it once for overall flow and logic before checking grammar and sentence structure. This is actually where I use Claude and ChatGPT the most, I paste in sections of my draft and ask for feedback on clarity, structure, and academic tone. I find it really helpful because it points out awkward phrasing or unclear arguments that I might not notice myself since I'm too close to my own writing. I still review and decide myself whether to accept the suggestions, I don't just copy-paste what it gives me." (Dira/AI-SU/SP/58-65)

On the other hand, a significant contrast case came from Bella, she explicitly refused to upload her draft writings to any AI tool at this phase, not due to technical limitations, but rather because of concerns regarding data security and the risk of plagiarism accusations:

"When finishing my draft I always read it from beginning until the end at least "3-4 times and while doing so I also edit it by removing or adding things so it will be better... For feedback I don't use AI because I always thought it was unsafe, I don't dare put my assignment files into AI because I'm afraid it will be detected as plagiarism. Sometimes, I just get help from friends." (Bella/ AI-SU/SP/40-42, 67-69).

Bella case was significant as it stood in contrast to the patterns observed among the other three participants: while Anne, Catherine, and Dira viewed AI as an evaluative partner that reinforced the self-regulation process, Bella positioned the rejection of AI as a form of self-regulation in itself, a self-protective strategy rooted in ethical caution rather than technological backwardness. Bella also consistently emphasized personal readability standards as the benchmark for evaluating her writing, rather than relying on AI validation:

"My only standard is if my writing is easy to read or to understand. If I can't understand what I'm writing, then it's probably bad." (Bella/ AI-SU/SP /73-74).

As for Dira, she demonstrated the most systematic self-regulation pattern during this phase, routinely verifying her writing against explicit rubric criteria and using AI as a tool for double-checking rather than merely for correction:

"I sometimes ask AI tools to evaluate my writing against these standards, for example, asking if my argument is clear or if my paragraph flows logically, as a way to double-check before I consider it finished." (Dira/AI-SU/SP/103-106).

Theme 3: Attitudes Towards AI**31. Perceived Benefits and Effectiveness**

Anne, Catherine, and Dira demonstrated perception regarding GenAI tools utilization, the use of GenAI tools assisted their writing more independently receive feedback that accelerates their understanding.

"AI tools encourage me to work more independently because I can receive feedback and explanations whenever I need them. They help me monitor my progress, solve writing problems, and reflect on my work more efficiently." (Dira/AT-AI/PBE/1227-130).

On the other hand, Bella argued that AI tools had no significantly transformative effect on their self-regulation skills, as they used the tools as simple, functional utilities rather than learning partners:

"For me personally, no. My focus in using AI in my writing is more for organizing ideas and correcting my grammar, I don't really use it to monitor my writing or even evaluating it so I don't think it help me be a better self-regulated reader or writer." (Bella/AT-AI/PBE/82-85).

3.2 AI Ethical Concern

All participants agreed on principle that writing should begin independently before AI is used to refine the language, and plagiarism is a major ethical concern. As Anne emphasized the importance of writing the initial draft without AI assistance

"I have to start writing by myself first without any helping from AI and after I finish my draft, I use AI tools to check my work... So, I don't really rely on those tools without using my own... strategies or my own knowledge." (Anne/ AT-AI/AI-EC/187-193).

"Of course, I always double-check the suggestions from the AI tools to make sure that everything is still in my own words... when I use AI to support my writing... I always make sure to use it with responsibility. So, it is important to not copy all the answers from the AI." (Anne/ AT-AI/AI-EC/61-63, 199-201).

"I believe students should use AI responsibly and ethically. AI should be used for learning support, feedback, brainstorming, and language improvement rather than for completing assignments entirely. It is important to maintain academic integrity, avoid plagiarism, verify information, and ensure that the final work represents the student's own understanding and effort." (Dira/ AT-AI/AI-EC/139-144).

Moreover, Catherine highlighted the importance of smart prompting and intellectual ownership, while Dira and Bella each emphasized the necessity of verifying AI outputs and exercising self-restraint to ensure responsibility and integrity. Overall, the participants viewed plagiarism as a major violation to be avoided when using AI output without proper attribution or adequate modification, a consensus affirming that all four participants, despite differing approaches to self-regulation, shared a commitment to maintaining critical control and ownership over the final written work as a common ethical principle.

"The use of AI follows the algorithm of the user. So you have to be smart to make the right prompt... as a writer, it should always strive or develop to generate their initial ideas, arguments, and process based on their own understanding and critical thinking. So this ensures our originality, our validation, and also intellectual ownership." (Catherine/AT-AI/EC/136-137, 147-151).

"I use AI tools as assistants rather than as replacements for my own thinking. I generate my own ideas first and then use AI to refine, organize, or review them. I always verify the suggestions and make sure the final work reflects my own understanding and writing style." (Dira/AT-AI/EC/133-136).

These indicated that GenAI was acceptable as a support tool for feedback, brainstorming, and language refinement, but not as a substitute for students' own thinking or a means of completing assignments outright. Verifying AI-generated suggestions, attributing original sources, and ensuring that final work reflects one's own understanding were treated by all four participants as non-negotiable safeguards against plagiarism, regardless of how extensively each of them relied on AI tools elsewhere in the writing process.

4. Discussion

These findings present new insights gained from a selected participant who performs well in academic writing coursework or Thesis Proposal Writing, and demonstrates the responsible use of AI to support their self-regulation in academic writing activities. The thematic analysis demonstrates how Indonesian EFL graduate students utilize Generative AI tools in their academic writing, as well as their attitude toward the use of GenAI tools.

Generative AI as a Digital Scaffold for Self-regulated Learning (SRL)

These findings demonstrated that Indonesian graduate students utilize GenAI tools as a context-specific external scaffold rather than substitutes for the self-regulation process itself. However, as the pattern of findings highlighted, the contributions of GenAI was not affected students' self-regulated learning (SRL) habits in the same way. It depended heavily on how and for what purpose students strategically utilize it.

This divergence was most clearly illustrated through an engagement continuum, for Bella, GenAI functions were as a mechanical tool used purely for technical repairs, without deeper reflective involvement; for Anne and Catherine, GenAI acted as a cognitive scaffold that assist in clarifying thought processes and argument structures during writing; whereas for Dira, GenAI acted as reflective partner, she did not merely accept GenAI suggestions, but actively verifies them against their own critical judgement and evaluation rubric before choosing to accept or reject GenAI suggestions. This continuum, mechanical tools, cognitive scaffold, reflective partner, represented the primary conceptual contribution of this study, the level of Self-regulation achieved by students was not determined by the GenAI tools used, but by how strategically students position themselves in relations to those GenAI tools.

Forethought Phase: AI as Non-Uniform Planning Support

In the forethought, the findings showed that GenAI tools, such as ChatGPT, Gemini, Claude, Perplexity, Quillbot, and Grammarly, were the most effectively used for organizational strategies and idea transformation. As demonstrated Bella, Catherine, and Dira, using ChatGPT to construct structural outlines helps clarify writing goals prior to composition. This finding reinforced and extended by Wu and Lai (2024) and Guan et al (2024) regarding the role of conversational AI in offering guidance during the planning stage. Specifically, the present study shows that this function is not uniform across learners, but rather differentiates into at least three distinct patterns: literature-based goal setting, motivational regulation to overcome procrastination, and compensation for specific cognitive difficulties, a nuance that has not been explicitly distinguished in prior literature.

Performance Phase: Separating AI Monitoring and Internal Goal Settings

In the performance phase, a seemingly contradictory pattern emerged, while some participants reported that GenAI assisted in writing progress, Bella and Dira regulated their writing behaviour through personal goal orientation, such as deadline, rather than through GenAI. Thin tension was not a true contradiction, instead, it reflected a division of regulatory functions operating at different levels. In this study GenAI operated at a local, content-based monitoring level, for instance, Dira's practice of checking whether her draft

remained on topic through GenAI represent an advanced form of metacognitive monitoring as it involved active comparison between the text and initial plan. Conversely, macro-level task completions monitoring, such as deadline, remains governed by students' internal goal orientation (Zimmerman, 2000), a dimension inherently beyond the scope of GenAI tools.

Therefore, a critical distinction must be drawn between AI-assisted writing, where GenAI helped produce or refine sentences, as experienced by nearly all participants, and GenAI supported self-regulation, where GenAI was deliberately employed to check alignment plan or standard. Surface-level sentence refinement, absent goal setting, monitoring, or strategic decision-making, did not inherently constitute evidence of SRL.

Self-Reflection Phase: Variations in Evaluative Trust

In this reflection phase, the participants utilized Grammarly, Claude, and ChatGPT to identify both structural and mechanical issues in their draft. This finding aligned with and expanded upon Song and Song (2023), whereas their study found that automated feedback helped ELF learners write more fluently, the present study revealed that utilization of strategies can be highly personalized. Dira's distinct strategies of using GenAI as a first feedback loop prior to consulting her supervisor, this demonstrated a strategic approach to social help seeking by resolving linguistic clarity issues first, then reserved supervisor consultations for higher-order concerns, such as argumentative substance and content accuracy.

On the other hand, Bella's firm decision not to upload her drafts to any GenAI tools, driven by concerns over plagiarism detection, offering a critical perspective within the discourse on GenAI integration in academic writing. This finding aligned with Rana's (2021) observations regarding second-language learners' trust negotiation with automated feedback systems, while qualifying the findings of Amani and Bisriyah (2025). While Amani and Bisriyah observed that Indonesian students generally trusted GenAI for language correction, the present study demonstrated that graduate students exhibit significantly greater caution regarding data privacy, intellectual property, and institutional regulations, likely due to the stake associated with their writing were substantially higher.

Integrating Ethical Findings with SRL Theory

The participants' ethical consideration, verifying GenAI suggestions, refusing to upload high-risk draft and maintaining autonomous writing before consulting GenAI should not be understood as ethical issue isolated from SRL. Instead, they represent direct manifestations of self-monitoring, evaluate judgement, agency, and strategic control within Zimmerman's framework. For instance, Bella's refusal to use GenAI reflects caution-based self-regulation rather than technological inertia, whereas Dira's practice of auditing AI suggestions against her own standards demonstrates active strategic control, indicating participants' ethical responses to GenAI constitute a concrete form of self-regulation in academic writing in the AI era.

5. Conclusion

This study explored the utilization of GenAI tools in supporting self-regulated learning strategies among Indonesian EFL graduate students, grounded from Zimmerman's (2002) cyclical model of SRL. The findings revealed that although students utilize a variety of GenAI tools, including ChatGPT, Gemini, Claude, Perplexity, Quillbot, and Grammarly, GenAI integration did not automatically yield self-regulatory development. In the forethought phase, GenAI served as valuable conceptual and emotional support, mitigating task ambiguity and writing anxiety during critical thesis-drafting stages.

However, during the performance phase, GenAI does not replace internal metacognitive monitoring; students continue to rely on personal goal setting, environmental management, and institutional deadlines to monitor their progress. In the

self-reflection phase, varying levels of evaluative trust highlight key distinctions among students: those who actively engage with AI feedback report heightened perceptions of writing self-efficacy, whereas others adopt a more cautious stance due to concerns regarding data privacy and academic integrity.

Moreover, this study highlighted that GenAI acted as a supportive scaffold rather than a replacement for human cognitive processing, for autonomous language learners, meaningful metacognitions growth occurs primary when they possess sufficient baseline self-efficacy and critical reflective skills. When GenAI was restricted to basic linguistic corrections, its function remains limited to a quick fix without promoting deeper cognitive development. Consequently, preserving human agency remains crucial for safeguarding original expression, protecting intellectual property, and upholding academic integrity in postgraduate language education.

Despite this distribution, this study had several limitations. The small sample size—comprising four graduate students from a single Thesis Proposal Writing course—constrains the generalizability of the findings to the broader Indonesian postgraduate context. Future research should involve larger participant samples across diverse academic contexts to enrich the discourse on GenAI integration in academic writing. Furthermore, subsequent studies employing mixed-methods designs could yield a more comprehensive framework for policymakers formulating effective human-AI interaction guidelines in foreign language education.

The pedagogical implications emphasize the significant potential of integrating GenAI tools to cultivate self-regulated writing among graduate EFL students. These findings extend Zimmerman's SRL framework by demonstrating that GenAI functions as a supportive digital partner whose contribution depends on how strategically students position it, rather than operating uniformly as a digital peer for all users. Finally, this study highlights the role of GenAI in offering timely, personalized feedback to refine text structure, coherence, grammar, and vocabulary, while recommending that educators embed critical AI literacy—encompassing critical evaluation, prompting, verification, and self-reflection—into existing academic writing instruction.

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