
Navigating chatgpt in academic writing: Perceptions, challenges, and strategies among university EFL students

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Abstract

This study explores EFL students' perceptions of ChatGPT's effectiveness in academic writing, the challenges they encounter, and their strategies for responsible use. Using a quantitative survey design, data were collected from 81 fifth-semester English Language Education students at Universitas Jambi, Indonesia. The instrument was a closed-ended questionnaire adapted from Al-Sofi (2024), and the data were analyzed using descriptive statistics. Most students perceived ChatGPT as effective, particularly for brainstorming (91.4%), organizing their writing (79.0%), and outlining (76.5%). Interpreted through Self-Regulated Learning theory, these results suggest that ChatGPT acts as a cognitive scaffold, most clearly during planning. However, students also expressed notable concerns. Over 70% worried about the originality of their writing and over 50% about plagiarism, while 45% to 47% feared reduced creativity and critical thinking. Through the lens of ethical literacy, these concerns show that students can recognize ethical risks but still need support in ethical reasoning and action. Regarding strategies, 85.2% believed that ChatGPT should complement rather than replace lecturer feedback, and 91.3% called for formal training on responsible AI use. Yet only 30.9% had received such training. The study concludes that ChatGPT can enhance academic writing when used responsibly. Institutions, however, must establish clear ethical guidelines, provide targeted training, and develop assessment methods that preserve critical thinking and academic integrity.

Keywords

Academic writing, AI writing assistant, ChatGPT, EFL students, self-regulated learning

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Introduction

Proficiency in English academic writing is fundamental for students in English Language Education programs. It underpins their success in academic coursework and in future professional practice. However, research consistently documents the significant challenges that EFL students face in producing well-structured academic texts. These difficulties operate at two levels. The first involves surface-level issues of grammar, vocabulary, spelling, and punctuation (Fajaryani et al., 2021). The second involves deeper cognitive challenges related to idea development, critical thinking, and argumentation (Ananda et al., 2024; Nawangsih et al., 2024). Students also struggle to locate, evaluate, and integrate appropriate scholarly sources when composing literature reviews (Abrar et al., 2023). These persistent challenges have prompted educators to explore technological solutions that might support students' writing development.

The emergence of generative AI tools, particularly ChatGPT, has opened new possibilities for addressing these writing challenges. ChatGPT offers several potential advantages (Widjaya et al., 2024). These include easier access to information, flexibility in generating content across formats, greater time efficiency, and opportunities for personalized feedback. Students can use ChatGPT to brainstorm ideas, structure outlines, paraphrase complex texts, and refine grammatical accuracy. Alongside these benefits, however, come significant concerns. Research has identified several risks (Husnaini & Madhani, 2024; Prathama et al., 2024; Yasmar & Amalia, 2024). These include inaccurate information, limited contextual understanding, weakened analytical and critical thinking, heightened plagiarism risks, and overdependence on the tool. This tension between potential and risk leaves both students and educators uncertain about how to integrate ChatGPT responsibly into academic writing practice.

Understanding this integration requires theoretical frameworks that address both its cognitive and its ethical dimensions. This study draws on Self-Regulated Learning (SRL) theory (Pintrich, 2004; Zimmerman, 2000), which conceptualizes learning as a cyclical process. The cycle involves forethought (planning and goal setting), performance (strategy implementation and self-monitoring), and self-reflection (evaluation and adaptation). Through this lens, ChatGPT can be examined either as a scaffold that supports self-regulated writing or as a crutch that undermines it. Complementing SRL, ethical literacy theory (Campbell, 2003; Rest et al., 1999; Tirri, 2010) examines how students handle ethical dilemmas. It asks how they recognize such dilemmas (ethical sensitivity), reason through them (ethical reasoning), and act on their conclusions (ethical action). Together, these frameworks allow a comprehensive analysis of how students navigate the cognitive and ethical complexities of AI-assisted academic writing.

Despite growing global interest in ChatGPT's role in education, several research gaps remain. Recent studies have examined students' and teachers' perceptions of ChatGPT in EFL writing (Hongxia & Razali, 2025; Mahapatra, 2024; Rahma & Fithriani, 2024). Others have investigated its impact on writing quality (Polakova & Ivenz, 2024; Teng, 2024). However, few studies integrate perceived effectiveness, experienced challenges, and student-generated strategies within a single theoretical framework. Research in Indonesian higher education,

particularly at regional universities, also remains limited. Existing Indonesian studies (Pasaribu et al., 2025; Werdiningsih et al., 2024) offer valuable insights. Most, however, focus on urban institutions that may have stronger technological infrastructure and institutional support. Regional universities such as Universitas Jambi serve large EFL student populations and may face distinct challenges in AI integration. Yet they remain underrepresented in this literature.

This study addresses these gaps by examining how fifth-semester English Language Education students at Universitas Jambi perceive, experience, and navigate ChatGPT use in academic writing. It makes four contributions. First, it integrates SRL and ethical literacy theories to analyze cognitive support, motivational factors, and ethical considerations together. Second, it examines not only what students perceive and experience but also which strategies they endorse and which institutional support they consider necessary. This focus offers actionable insights for pedagogy and policy. Third, it provides empirical data from an understudied regional context, enabling comparison with findings from urban institutions. Finally, the findings can inform context-appropriate policies, training programs, and pedagogical approaches. Such measures should balance AI's potential with the preservation of academic integrity, critical thinking, and authentic skill development. The following research questions guide this investigation:

1. How do English Language Education students perceive the effectiveness of ChatGPT in supporting different aspects of their academic writing?
2. What challenges do students encounter when integrating ChatGPT into their academic writing processes?
3. Which strategies do students endorse, and what institutional support do they consider necessary, for the responsible and effective use of ChatGPT in academic writing?

By addressing these questions, this study aims to provide evidence-based guidance for three groups. These are educators seeking to integrate AI tools responsibly, policymakers developing institutional guidelines, and students learning to navigate AI-supported writing ethically and effectively.

Literature Review

Self-regulated learning theory

Self-Regulated Learning (SRL) theory emphasizes students' ability to regulate their own learning through cognitive, metacognitive, motivational, and behavioral processes. Zimmerman (2000) divides SRL into three phases: forethought, performance, and self-reflection. The forethought phase involves planning and goal setting. The performance phase involves implementing strategies and monitoring progress. The self-reflection phase involves evaluating the success of those strategies and the resulting learning outcomes. Pintrich (2004) extends this model by distinguishing four areas of regulation: cognition, motivation, behavior, and context.

In the context of academic writing with ChatGPT, SRL theory helps explain how EFL students regulate their use of AI tools in each phase of writing. In the planning phase, students can use ChatGPT as a source of ideas, for concept clarification, or for outline development. During the performance phase, students may use ChatGPT to monitor writing quality, check

grammar, and revise text structure. Challenges arise, however, when students have low self-regulation and become over-reliant on AI output. During the reflection phase, students judge whether ChatGPT actually improved their writing skills or made them passive. SRL therefore helps explain variation in students' perceptions, challenges, and strategies when they use ChatGPT for academic writing.

Ethical literacy

Ethical literacy refers to an individual's ability to recognize ethical dilemmas, reason morally, and make decisions consistent with academic ethical values. Campbell (2003) defines ethical literacy as a combination of moral sensitivity, moral reasoning, moral imagination, and moral agency. Tirri (2010) emphasizes three main components: ethical knowledge, ethical skills, and ethical values. Ethics becomes an increasingly significant issue when students use ChatGPT for academic writing. Students must distinguish legitimate uses, such as clarifying concepts, correcting grammar, or generating ideas, from unethical ones. Unethical uses include AI-based plagiarism, copying raw output, and neglecting fact-checking. Ethical literacy thus explains how students make ethical decisions when using ChatGPT. This includes recognizing risks such as misinformation, AI hallucinations, and undisclosed AI contributions, as well as the need to maintain academic integrity. The theory therefore helps explain the moral challenges students face and the ethical strategies they adopt when writing with ChatGPT.

The two theories complement each other. SRL explains how students manage their learning and writing processes with ChatGPT's help, whereas ethical literacy explains how they make ethical decisions during those processes. Combined, they offer a strong framework for examining students' perceptions, challenges, and strategies in using ChatGPT productively and responsibly for academic writing.

Methodology

Research design

This study employed a quantitative survey design to systematically examine patterns in students' perceptions, challenges, and strategies related to ChatGPT use in academic writing. A survey approach was chosen for three reasons (Creswell & Creswell, 2018). It allows standardized measurement across a sample, statistical identification of patterns and trends, and efficient data collection from a relatively large group. The study adopted a post-positivist paradigm. It sought to measure observable phenomena, such as student perceptions and reported behaviors, while acknowledging that these represent subjective interpretations of experience. The research is part of a larger mixed-methods project. Given the substantial quantitative findings and the value of reporting them promptly, this paper presents the survey phase independently. The researchers had conducted the preliminary data before conducting this survey (Fajaryani et al., 2025). Qualitative interview data exploring individual experiences and decision-making processes will be reported in a subsequent publication.

Respondents and sampling

Respondents were 81 fifth-semester students enrolled in the English Language Education Study Program at the Faculty of Teacher Training and Education, Universitas Jambi. Fifth-semester students were selected because they had completed core academic writing courses (Academic Writing, Research Methodology, and Literature Review Writing) and were developing thesis proposals. This gave them substantial experience with academic writing tasks in which ChatGPT might be used.

Convenience sampling was used because of accessibility and resource constraints. An online recruitment announcement was distributed through class WhatsApp groups, inviting all fifth-semester students ($N = 120$) to participate voluntarily. The final sample of 81 participants represented a 67.5% response rate. Participation criteria were (1) active enrollment in the program, (2) completion of at least two academic writing courses, (3) current engagement in thesis proposal writing, and (4) prior experience using ChatGPT for any academic writing task.

The sample comprised 72 female (88.9%) and 9 male (11.1%) students, reflecting the gender distribution typical of English Education programs in Indonesia. All participants gave informed consent and were assured of confidentiality and anonymity. No incentives were offered for participation.

Research instrument

Data were collected using a closed-ended questionnaire adapted from Al-Sofi (2024), who developed the instrument to examine Saudi EFL students' perceptions of ChatGPT in academic writing. Three EFL writing specialists reviewed the original English-language questionnaire for content validity and cultural appropriateness in the Indonesian context. Minor modifications were made to ensure linguistic clarity and contextual relevance. For example, "instructor" in the original was replaced with "lecturer," the term more familiar in Indonesia.

The adapted questionnaire consisted of 32 items across four sections. Items in Sections 2 to 4 used a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree): Perceived effectiveness (11 items): ChatGPT's role in supporting various writing processes (e.g., "ChatGPT assists me in brainstorming ideas for my research work") Challenges and concerns (11 items): Ethical, cognitive, and practical difficulties (e.g., "ChatGPT generates inaccurate or misleading content when used in writing research projects"). Strategies for responsible use (10 items): Student practices and institutional support needs (e.g., "Students should use ChatGPT as an assistant tool rather than relying on it exclusively").

Reliability and validity

Al-Sofi (2024) reported a Cronbach's alpha of .965 for the original instrument. In the present study, reliability was reassessed with the collected data. Cronbach's alpha for the full

adapted instrument was .94, indicating excellent internal consistency (Tavakol & Dennick, 2011). The subscale coefficients were .91 for effectiveness, .88 for challenges, and .89 for strategies. All values exceed the commonly accepted threshold of .70, supporting the instrument's reliability for this population.

Data collection and analysis

Data were collected over three weeks in October 2025, midway through the fifth semester, when participants were actively working on their thesis proposals. The questionnaire was distributed electronically via Google Forms, and the link was shared through class WhatsApp groups. Although the larger project includes semi-structured interviews with selected participants, this paper reports only the quantitative survey phase. The interview data are being analyzed separately and will be presented in a subsequent publication.

Responses from Google Forms were exported to Microsoft Excel. Before analysis, the data were screened for completeness and accuracy. All 81 questionnaires were complete, with no missing values. Descriptive statistics were calculated for each item and subscale. For individual items, frequency distributions and percentages were computed for each response category, from Strongly Disagree to Strongly Agree. These results are presented in Tables 1 to 3. Following common practice in educational research, Likert responses were treated as interval data for calculating means (Norman, 2010). We nonetheless acknowledge the ordinal nature of the scale. To interpret mean scores, the following ranges were used: 1.00–2.33: Low agreement/effectiveness; 2.34–3.67: Moderate agreement/effectiveness; 3.68–5.00: High agreement/effectiveness. These ranges were obtained by dividing the scale range ($5 - 1 = 4$) into three equal intervals, consistent with prior research using similar instruments (Al-Sofi, 2024). Results are presented in tables to aid interpretation. The discussion then interprets these findings through the SRL and ethical literacy frameworks, moving beyond description.

Results

This section presents findings from the survey of 81 fifth-semester English Language Education students on their perceptions, challenges, and strategies related to ChatGPT use in academic writing. It first describes participant characteristics and ChatGPT usage patterns and then presents the findings for each research question.

Respondents' characteristics and ChatGPT usage patterns

Before examining students' perceptions, challenges, and strategies, we describe respondents' characteristics and ChatGPT usage patterns to contextualize the findings. Respondents reported varying levels of ChatGPT use in academic writing. Most used ChatGPT "sometimes" ($n = 45, 55.6\%$) or "often" ($n = 28, 34.6\%$), whereas fewer used it "always" ($n = 5, 6.2\%$) or "rarely" ($n = 3, 3.7\%$). No participant reported "never" using ChatGPT, which is expected because prior ChatGPT experience was an inclusion criterion. This distribution suggests that, although these students have widely adopted ChatGPT, most use it selectively rather than as a constant writing companion.

Respondents completed coursework varied. The most commonly completed course was Academic Writing (n = 78, 96.3%), followed by Research Methodology (n = 75, 92.6%) and Literature Review Writing (n = 68, 84.0%). Fewer students had completed Advanced Academic Writing (n = 24, 29.6%) or Thesis Writing (n = 18, 22.2%), as these courses are typically offered in later semesters. This background indicates that respondents had foundational academic writing knowledge against which to evaluate ChatGPT's contributions. These usage patterns and educational backgrounds matter for interpreting the findings. Students with substantial academic writing training may perceive ChatGPT's role differently from novice writers. Usage frequency may also relate to both perceived effectiveness and experienced challenges.

Perceived effectiveness of chatgpt in academic writing

Table 1. *Effectiveness of chatgpt in enhancing academic writing*

No.	Statements	SA	A	N	D	SD	M	SD
1.	ChatGPT assists me in brainstorming ideas for my research work.	32.1%	59.3%	6.2%	3.7%	0%	4.237	0.707
2.	ChatGPT assists me in outlining my research work.	22.2%	54.3%	18.5%	6.2%	0%	3.961	0.806
3.	ChatGPT generates helpful texts for my research work.	13.6%	49.4%	29.6%	8.6%	0%	3.716	0.818
4.	ChatGPT enhances my writing style when writing assignments and research work.	9.9%	51.9%	29.6%	7.4%	2.5%	3.632	0.863
5.	ChatGPT assists me in summarizing relevant literature in my selected field.	12.3%	54.3%	27.2%	4.9%	1.2%	3.713	0.787
6.	ChatGPT assists me in paraphrasing ideas.	8.6%	51.9%	24.7%	13.6%	2.5%	3.544	0.922
7.	ChatGPT helps me in the process of reviewing and editing my research work.	6.2%	58%	25.9%	8.6%	2.5%	3.604	0.835
8.	ChatGPT enables me to remain up-to-date with the latest research trends.	11.1%	55.6%	25.9%	6.2%	2.5%	3.705	0.852
9.	ChatGPT increases my confidence in writing academic papers in English.	11.1%	48.1%	28.4%	11.1%	2.5%	3.578	0.921
10.	ChatGPT helps me learn how to structure and organize my writing more effectively.	8.6%	70.4%	16%	3.7%	1.2%	3.812	0.684
11.	ChatGPT improves my ability to use academic vocabulary and formal style.	11.1%	65.4%	23.5%	4.9%	0%	3.974	0.729

Note: *Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)*

Table 1 presents students' perceptions of ChatGPT's effectiveness across 11 dimensions of academic writing. Overall, students expressed predominantly positive views, with combined

agreement (Strongly Agree plus Agree) ranging from 59.2% to 91.4%. Agreement was highest for brainstorming ideas (91.4%), learning to structure and organize writing (79.0%), and outlining research work (76.5%). These findings suggest that students value ChatGPT most in the early stages of writing, which involve idea generation and organization.

Several areas received moderate to strong agreement. These included improving academic vocabulary and formal style (76.5%), staying current with research trends (66.7%), summarizing relevant literature (66.6%), and reviewing and editing research work (64.2%). Agreement was lowest for generating helpful texts (63.0%), enhancing writing style (61.8%), paraphrasing ideas (60.5%), and increasing confidence in writing (59.2%). Neutral responses were higher (24.7% to 29.6%) for Items 3, 4, 6, and 9, suggesting uncertainty about ChatGPT's effectiveness in these areas. This uncertainty may reflect inconsistent experiences or ambivalence about certain applications. Overall, students perceived ChatGPT as most effective for idea generation and organizational tasks such as brainstorming, structuring, and outlining. They perceived it as least effective for building confidence and for generating original content. This pattern suggests that students view ChatGPT more as a planning and editing assistant than as a content creator or motivational tool.

Challenges and concerns in using chatGPT

Table 2. *Challenges in using chatgpt for academic writing*

No.	Statements	SA	A	N	D	SD	M	SD
1.	ChatGPT generates inaccurate or misleading content when used in writing research projects.	7.4%	45.7%	37%	9.9%	0%	3.506	0.772
2.	ChatGPT encourages plagiarism in my academic writing.	7.4%	44.4%	34.6%	12.3%	2.5%	3.455	0.890
3.	ChatGPT prompts me to become overly reliant on its assistance when used in writing research projects.	6.2%	33.3%	40.7%	21%	1.2%	3.295	0.739
4.	ChatGPT prompts ethical concerns when used in academic research writing.	6.2%	46.9%	38.3%	8.6%	0%	3.507	0.739
5.	Using ChatGPT in academic research writing results in a decline in my creative abilities.	7.4%	39.5%	38.3%	14.8%	0%	3.395	0.826
6.	Using ChatGPT in academic research writing prompts me to abandon my critical thinking.	3.7%	42%	28.4%	24.7%	1.2%	3.223	0.902
7.	Using ChatGPT in academic research writing reduces the integrity of academic writing.	7.4%	40.7%	35.8%	14.8%	1.2%	3.380	0.867
8.	I believe ChatGPT can complement, but not replace, feedback from my lecturer.	42%	43.2%	13.6%	2.5%	0%	4.286	0.778
9.	I worry that using ChatGPT may affect the originality of my writing.	19.8%	50.6%	23.5%	7.4%	0%	3.867	0.835
10.	I find it difficult to decide which parts of the text should be revised by	6.2%	44.4%	28.4%	22.2%	0%	3.382	0.893

	ChatGPT and which should be my own.							
11.	I sometimes feel unsure if using ChatGPT violates academic rules.	11.1%	48.1%	32.1%	8.6%	2.5%	3.639	0.897

Note: *Strongly Agree (SA)*, *Agree (A)*, *Neutral (N)*, *Disagree (D)*, *Strongly Disagree (SD)*

Table 2 presents students' perceptions of the challenges and concerns related to ChatGPT use. Compared with the largely positive views on effectiveness, responses to the challenge items showed more uncertainty, with neutral responses ranging from 13.6% to 40.7%. The highest agreement concerned originality (70.4%), inaccurate or misleading content (53.1%), and encouragement of plagiarism (51.8%). These top concerns all relate to academic integrity and content quality. Students thus appear most worried about ethical and accuracy issues.

Several items received moderate agreement alongside substantial neutrality. These concerned ethical issues in general (53.1%), reduced integrity of academic writing (48.1%), decline in creative abilities (46.9%), and abandonment of critical thinking (45.7%). Overdependence drew the highest neutral response (40.7%), with only 39.5% of students agreeing. In addition, half of the students (50.6%) found it difficult to decide which parts of a text ChatGPT should revise. The high neutrality suggests that many students are unsure whether these are genuine problems. They may lack experience, may not have reflected deeply on these issues, or may not yet have encountered negative consequences.

A majority of students (59.2%) felt unsure whether using ChatGPT violates academic rules, while 32.1% were neutral and 11.1% disagreed. This indicates widespread confusion about institutional policies. Item 8 is also noteworthy: 85.2% agreed that ChatGPT complements, but does not replace, lecturer feedback. Although this item sits in the challenges section, it reflects a mature understanding rather than a concern. Students recognize ChatGPT's limitations and value human guidance, which is encouraging for responsible integration. In sum, students expressed clear concerns about originality, accuracy, and plagiarism. They were far less certain about cognitive effects, such as reduced creativity and critical thinking, and behavioral effects, such as overdependence. The widespread confusion about whether ChatGPT use breaks academic rules points to a critical gap in institutional guidance.

Strategies for responsible and effective chatgpt use

Table 3. *Strategies for responsible and effective use of chatgpt*

No.	Statements	SA	A	N	D	SD	M	SD
1.	Students should use ChatGPT as an assistant tool rather than relying on it exclusively.	39.5%	37%	22.2%	2.5%	0%	4.171	0.839
2.	Students should use ChatGPT responsibly to enhance their academic writing skills.	32.1%	46.9%	18.5%	2.5%	0%	4.086	0.774
3.	Students should critically evaluate the information provided by ChatGPT.	43.2%	44.4%	11.1%	2.5%	0%	4.319	0.757
4.	Students should be trained on how to use ChatGPT effectively.	44.4%	46.9%	6.2%	2.5%	0%	4.332	0.704

5.	Students should use ChatGPT for proofreading and editing already-written texts rather than generating texts.	22.2%	53.1%	23.5%	3.7%	0%	4.013	0.779
6.	Lecturers should be equipped with tools and strategies to identify AI-generated content.	16%	58%	23.5%	3.7%	0%	3.899	0.723
7.	Lecturers should reexamine their teaching methods and assessment techniques.	16%	56.8%	23.5%	3.7%	0%	3.851	0.722
8.	I believe universities should provide clear guidelines on the ethical use of ChatGPT for academic writing.	23.5%	59.3%	19.8%	1.2%	0%	4.165	0.711
9.	I have received formal training or instruction on how to use ChatGPT responsibly for writing tasks.	3.7%	27.2%	40.7%	27.2%	2.5%	3.063	0.891
10.	I actively try to blend ChatGPT's suggestions with my own ideas and writing style.	22.2%	63%	16%	0%	0%	4.110	0.617

Note: *Strongly Agree (SA)*, *Agree (A)*, *Neutral (N)*, *Disagree (D)*, *Strongly Disagree (SD)*

Table 3 presents students' views on strategies for responsible ChatGPT integration in academic writing. Overall, students strongly supported most of the proposed strategies, with agreement ranging from 72.8% to 91.3% (excluding Item 9, which asked about training received). Students overwhelmingly endorsed strategies of personal responsibility. These included critically evaluating information from ChatGPT (87.6%), blending its suggestions with their own ideas (85.2%), using it responsibly to enhance their skills (79.0%), and using it as an assistant rather than an exclusive tool (76.5%). These high levels of agreement suggest that students recognize their own agency and responsibility in using ChatGPT. On how ChatGPT should be used, students favored proofreading and editing over text generation (75.3%). This suggests that they distinguish between refinement, which they see as acceptable, and content creation, which they see as more problematic.

The most striking finding in this section concerns training. While 91.3% of students believed they should be trained to use ChatGPT effectively, only 30.9% had received such training, and 40.7% were neutral on this item. Students also supported adaptation by lecturers. They agreed that lecturers should be equipped to identify AI-generated content (74.0%) and should re-examine their teaching and assessment methods (72.8%). The similar percentages suggest that students see these measures as complementary, with lecturers needing both detection capabilities and pedagogical adaptation. Students also strongly supported institutional action, with 82.8% agreeing that universities should provide clear ethical guidelines. Combined with the 59.2% who felt unsure about rule violations (Table 2), this underscores an urgent need for institutional policy. In short, students advocate a multi-level response involving personal responsibility, targeted training, adaptation by lecturers, and institutional guidelines. The 60.4-percentage-point gap between perceived training needs and training received is the most critical finding. It suggests that current practice lags far behind students' needs.

Discussion

Perceived effectiveness of ChatGPT in academic writing, the patterns in students' perceived effectiveness can be interpreted through Zimmerman's (2000, 2002) cyclical model of self-regulated learning. The model describes learning as moving through three interconnected phases: forethought, performance, and self-reflection. The highest-agreement items, namely brainstorming (91.4%), organizing writing (79.0%), and outlining (76.5%), correspond closely to the forethought phase. This phase involves task analysis, strategic planning, and goal setting (Zimmerman, 2000). Students' strong perception that ChatGPT aids these activities suggests that the tool functions as a planning scaffold, helping learners conceptualize writing tasks before execution. This aligns with Pintrich's (2004) emphasis on strategic planning in self-regulated learning. By supporting brainstorming and outlining, ChatGPT may reduce cognitive load during planning and free mental resources for higher-order thinking (Sweller et al., 1998). However, the neutral responses on the outlining (18.5%) and organizing (16.0%) items suggest that not all students find ChatGPT equally supportive during planning. This variability may reflect differences in how students prompt ChatGPT, in their prior writing knowledge, or in their metacognitive awareness of planning. All of these factors are known to influence success in self-regulated learning (Zimmerman, 2002).

Items related to summarizing (66.6%), paraphrasing (60.5%), and editing (64.2%) align with the performance phase of SRL, which involves strategy implementation and self-monitoring (Pintrich, 2004). The moderate-to-strong agreement suggests that ChatGPT supports these active writing processes, though less consistently than planning activities. The higher neutral percentages (24.7% to 27.2%) may indicate that ChatGPT's usefulness during performance depends on context, task complexity, or users' skill in evaluating and adapting AI suggestions. Such evaluation is a core metacognitive monitoring ability in SRL (Schunk & Zimmerman, 2008). Notably, students were less certain about ChatGPT's effectiveness in generating helpful texts (29.6% neutral). This hesitancy may reflect ethical concerns about originality or practical concerns about text quality. Both require metacognitive judgment during the performance phase. Self-regulated learners would critically evaluate generated text rather than accept it uncritically.

The confidence-building item (59.2% agreement, 28.4% neutral) relates to the self-reflection phase of SRL, which involves self-evaluation, attribution, and adaptive responses (Zimmerman, 2002). The lower agreement and high neutrality suggest that ChatGPT's effect on self-efficacy is uncertain or variable. This matters because self-efficacy is a critical motivational component of SRL (Bandura, 1997) that influences goal setting and persistence (Zimmerman, 2000). If ChatGPT undermines self-efficacy by creating dependence, it could paradoxically hinder self-regulated learning while supporting specific writing processes.

These findings largely align with Hongxia and Razali's (2025) study of Chinese EFL undergraduates, which similarly found ChatGPT most effective for idea generation and organization. However, our participants expressed more uncertainty about confidence building than the Indian ESL students in Mahapatra's (2024) study, who reported increased writing confidence. This difference may reflect cultural factors, institutional contexts, or our participants' greater awareness of ethical concerns, which are discussed in the next section.

Through an SRL lens, ChatGPT appears to function as a differentiated scaffold. It strongly supports forethought processes such as planning and organization, and moderately supports performance processes such as summarizing and editing. Its support for self-reflection outcomes, such as confidence and self-efficacy, remains uncertain. This pattern suggests that ChatGPT is most effective when used strategically for specific writing subprocesses rather than as a comprehensive writing assistant. The variability in perceptions underscores the importance of explicit instruction in self-regulated ChatGPT use.

Challenges and concerns in using chatgpt, students' concerns and uncertainties can be analyzed through ethical literacy theory, which views ethical competence as three interconnected components (Campbell, 2003, 2008; Tirri, 2010). These are ethical sensitivity (recognizing ethical issues), ethical reasoning (analyzing and judging ethical dilemmas), and ethical action (behaving consistently with ethical principles). Students demonstrated ethical sensitivity by recognizing potential problems with ChatGPT use. More than half identified risks related to originality (70.4%), inaccuracy (53.1%), and plagiarism (51.8%). This awareness is foundational to ethical literacy, as one cannot address ethical issues one does not perceive (Tirri, 2010). The high concern about originality suggests that students understand that academic writing values authentic authorship, a core principle of academic integrity (Eaton, 2021). However, the substantial neutral responses (34.6% to 40.7%) on many items suggest incomplete ethical sensitivity. Campbell (2003) notes that ethical sensitivity develops through education and reflection. Students may not yet recognize certain issues as ethical rather than merely technical. For instance, the 40.7% neutrality on overdependence may indicate that students do not yet see it as an ethical issue affecting the integrity of learning.

The moderate agreement patterns suggest that students are engaging in ethical reasoning but reaching uncertain conclusions. Regarding creativity decline (46.9% agreement, 38.3% neutral), for example, students may be weighing competing considerations. ChatGPT might reduce creativity through overreliance, or it might enhance creativity by removing mechanical barriers. This reflects the complexity of ethical reasoning in ambiguous situations (Rest et al., 1999). The difficulty of separating one's own work from ChatGPT's assistance (50.6% agreement, 28.4% neutral) reveals a sophisticated reasoning challenge. If a student uses ChatGPT to paraphrase, is the resulting text still theirs? This gray area requires nuanced judgment about degrees of authorship, a complex task that lacks clear rules (Eaton, 2021; Perkins et al., 2024). Critically, 59.2% of students felt unsure whether ChatGPT use violates academic rules. This uncertainty impedes ethical reasoning because students lack the institutional framework needed to evaluate their actions. As Tirri (2010) argues, ethical reasoning operates within social contexts. Without clear institutional guidelines, students struggle to judge whether their behavior is acceptable.

The finding that 85.2% believed ChatGPT should complement, not replace, lecturer feedback shows an intention toward ethical action. Students express commitment to appropriate use. However, intention does not guarantee action. Campbell (2008) emphasizes that ethical action requires not only awareness and judgment but also moral courage, self-regulation, and environmental support. The difficulty in deciding what to revise with ChatGPT (50.6% agreement) suggests that students struggle to translate ethical intentions into specific behaviors. This gap between ethical reasoning and ethical action is well documented in moral psychology (Blasi, 1980). It highlights the need for practical guidance, not just abstract

principles. Our findings align with Pasaribu et al.'s (2025) study of Indonesian EFL students, who similarly reported high concern about plagiarism and originality. However, our participants showed more uncertainty, reflected in higher neutral percentages, than the Moroccan postgraduates in Bouzar et al.'s (2024) study, who expressed stronger concern about overdependence. This may reflect our participants' earlier stage of academic development (undergraduates rather than postgraduates) or their more limited experience with ChatGPT, resulting in more tentative evaluations.

Through an ethical literacy lens, these findings reveal a partially developed ethical framework. Students show ethical sensitivity to obvious integrity issues such as plagiarism and originality. They struggle, however, with more complex reasoning about cognitive effects and about the boundary between acceptable and unacceptable use. Most critically, the lack of institutional guidelines creates a vacuum that impedes both ethical reasoning and ethical action. As Campbell (2003) argues, ethical literacy develops through explicit instruction, reflective practice, and supportive institutional contexts.

The most actionable finding is that 59.2% of students were unsure about rule violations. This is not a failure of student ethics but an institutional failure to provide clarity. Universities cannot expect ethical action without clear ethical frameworks (Eaton, 2021). The urgent implication is that institutions must establish transparent AI-use policies. These policies should define acceptable use, citation requirements, and consequences, giving students the structure they need to exercise ethical judgment.

Strategies through self-regulated learning and institutional support frameworks, students' endorsed strategies can be analyzed through SRL theory, which addresses individual strategies, and through institutional support frameworks, which address systemic interventions. Together, these perspectives reveal a comprehensive vision for responsible ChatGPT integration. Students' strong endorsement of critical evaluation (87.6%), blending AI suggestions with their own ideas (85.2%), and using ChatGPT as an assistant rather than an exclusive tool (76.5%) reflects a sophisticated understanding of self-regulated learning. In Zimmerman's (2000) model, effective self-regulation requires metacognitive monitoring. Learners must continually evaluate whether their strategies are working and adapt as needed. Critically evaluating ChatGPT output is exactly this kind of monitoring applied to AI assistance. The preference for using ChatGPT for editing rather than generation (75.3%) shows strategic thinking about when AI assistance supports or undermines learning. This aligns with Winne and Hadwin's (1998) model of SRL, which emphasizes strategic choices based on task demands. Students seem to recognize that editing with ChatGPT lets them maintain authorship and cognitive engagement. Generating text with it, by contrast, risks passive consumption that bypasses learning processes. An important gap remains, however. Students endorse these strategies in principle, but whether they apply them consistently is unknown. Research on SRL consistently finds gaps between students' knowledge of effective strategies and their actual use (Zimmerman, 2002). This is precisely where training becomes critical.

The most significant finding in Table 3 is the large gap between perceived training needs (91.3%) and training received (30.9%). This 60.4-percentage-point difference indicates a systemic failure. Students clearly recognize that they lack the knowledge and skills for effective ChatGPT use, yet institutions have not provided the necessary support. This matters because self-regulated learning does not develop automatically. It requires explicit instruction,

modeling, and practice (Schunk & Zimmerman, 2008; Zimmerman, 2002). Research on technology integration shows that, without training, students tend to use tools superficially rather than strategically (Laurillard, 2012). The training gap also helps explain the uncertainties in Table 2. Students are unsure about overdependence, creativity effects, and appropriate boundaries because they have never been taught to think critically about these issues. Based on the challenges students identified (Table 2) and the strategies they endorsed (Table 3), effective training should address technical skills, metacognitive skills, ethical reasoning, and strategic integration. Such training should be embedded in academic writing courses rather than offered as separate workshops. Students could then practice guided ChatGPT use in authentic contexts with feedback from lecturers (Nguyen et al., 2024).

Students' support for equipping lecturers to identify AI-generated content (74.0%) and for re-examining teaching methods (72.8%) reflects an understanding that effective integration requires systemic change, not only changes in student behavior. The call for lecturers to identify AI content may reflect students' desire for accountability and fairness. Students may want to ensure that peers who over-rely on ChatGPT do not gain unfair advantages. However, research shows that AI detection tools are unreliable and prone to false positives (Weber-Wulff et al., 2023). They also tend to misclassify the writing of non-native English speakers as AI-generated (Liang et al., 2023). A more productive approach may be to redesign assessment so that misuse of ChatGPT becomes ineffective. Options include process-based portfolios, in-class writing, oral defenses, and unique, contextualized tasks (Perkins et al., 2024).

The call for re-examining teaching and assessment (72.8%) is well founded. Traditional assessments, such as take-home essays with predictable prompts, are vulnerable to AI misuse. Research on AI-resistant assessment suggests several responses. These include more in-class writing, iterative drafts with reflective commentary, unique contextualized prompts, oral presentations, and evaluation of writing processes as well as products (Eaton, 2023; Sullivan et al., 2023). The moderate rather than higher agreement may reflect student ambivalence. Students may want lecturers to adapt but also fear more difficult assessments.

Students' strong support for clear institutional guidelines (82.8%) directly addresses their confusion about rule violations (59.2% unsure; Table 2). This connection is critical, because students cannot exercise ethical judgment without ethical frameworks. As Campbell (2003) argues, ethical literacy develops within institutional contexts that provide moral structure.

What should institutional guidelines include? Emerging work on AI and academic integrity suggests several elements (Eaton, 2023; Lancaster, 2023). Policies should define acceptable use, citation requirements, and consequences. They should also explain the rationale for each rule and set expectations for individual assignments. Importantly, policies should enable rather than merely restrict. They should acknowledge ChatGPT's legitimate educational uses while protecting academic integrity (Eaton, 2023).

Students' multi-level vision aligns with educational technology research. This research holds that effective technology integration requires individual skill development, pedagogical adaptation, and institutional support (Ertmer & Ottenbreit-Leftwich, 2010; Mishra & Koehler, 2006). However, few studies have examined whether students themselves recognize this multi-level need. Our finding that students advocate systemic responses, not only personal strategies, is therefore noteworthy. The training gap we identified (60.4 percentage points) is consistent with broader patterns in AI literacy education, where rapid technological change outpaces

institutional response (Long & Magerko, 2020). Our contribution is to quantify this gap in a specific context, providing evidence for urgent institutional action. Although students' endorsed strategies are generally sound, perceptions of effective strategies do not guarantee that those strategies work. For instance, students' support for AI detection (74.0%) conflicts with research showing that detection tools are unreliable (Weber-Wulff et al., 2023). Future research should therefore examine not only which strategies students endorse but also which strategies actually promote learning and integrity.

These findings carry important implications for practice. Students should actively seek training opportunities, critically evaluate AI output rather than accept it passively, and stay aware of when ChatGPT helps or hinders learning. Lecturers should integrate AI literacy into writing courses and model strategic use. They should also redesign assignments and assessments to reduce misuse while still drawing on AI's legitimate educational benefits. Institutions must urgently close the training gap through systematic programs integrated into curricula. They should also develop clear, enabling policies that guide rather than merely restrict, and provide professional development that helps lecturers adapt their teaching.

This study makes several contributions. It applies both SRL and ethical literacy theories and quantifies critical gaps in training and policy. It also represents an understudied regional Indonesian context and shows that students themselves advocate systemic solutions. However, the study relies on self-report data from a single institution and uses a cross-sectional design. The findings should therefore be interpreted cautiously and supplemented by longitudinal, observational, and multi-institutional research. The central message is clear. Effective ChatGPT integration is achievable, but it requires deliberate institutional action. Students have already identified what they need: training, clear policies, and pedagogical guidance.

Conclusion

This study examined EFL students' perceptions, challenges, and strategies related to ChatGPT use in academic writing at Universitas Jambi, Indonesia. Through a survey of 81 fifth-semester English Language Education students, it explored how students experience ChatGPT in their writing practices and what support they need for effective, ethical use. The findings paint a nuanced picture. Students perceived ChatGPT as highly effective for planning activities such as brainstorming and organizing, suggesting that it functions as a cognitive scaffold for self-regulated learning. At the same time, they expressed concerns about originality, accuracy, and plagiarism. These concerns reflect ethical awareness, but students often lack clear frameworks for ethical reasoning. The most striking finding is the large gap between perceived training needs and training received. This gap connects directly to widespread confusion about academic rules. Students advocate a comprehensive response involving personal responsibility (critical evaluation of AI output), adaptation by lecturers (pedagogical and assessment redesign), and institutional support (clear policies and systematic training). This multi-level vision shows that students recognize that effective AI integration requires systemic change, not only changes in individual behavior.

Disclosure Statement

No potential conflicts of interest were reported by the authors.

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