

Exploring the Dual Edges of ChatGPT in Academic Writing Pedagogy

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Received 2024-12-12; Revised 2025-04-16;
Accepted 2025-04-23; Published Online 2025-06-24

Abstract

This study critically examines the integration of ChatGPT into academic writing pedagogy through a systematic review of 19 peer-reviewed articles published between 2023 and 2024. It aims to (1) examine the pedagogical benefits of ChatGPT in academic writing instruction, (2) identify the limitations and challenges of AI-assisted writing, and (3) assess the impact of ChatGPT's use across different educational settings. Drawing on constructivist, sociocultural, and cognitive load theories, this review categorizes the findings into three main themes: pedagogical benefits (e.g., personalized feedback, conceptual understanding, and idea generation), pedagogical challenges (e.g., academic integrity risks, misinformation, and learner dependency), and practical applications in classroom contexts. The analysis reveals that while ChatGPT offers promising support for student engagement and skill development, it also presents significant ethical and instructional concerns. This study recommends a balanced and critically informed approach to integrating ChatGPT in writing pedagogy, emphasizing ethical use, educator involvement, and future research into long-term impacts and equity in access.

Keywords: *ChatGPT, academic writing, artificial intelligence, writing pedagogy, systematic review, educational technology*

1. Introduction

1.1 Background of the study

The integration of artificial intelligence (henceforth AI) into higher education has emerged as a transformative force, enabling more personalized, interactive, and adaptive learning experiences that support the development of essential academic and soft skills such as communication, collaboration, and problem-solving (Alvarado-Bravo et al., 2024). Recent advancements in AI-driven language models such as ChatGPT, which leverage natural language processing to generate human-like text and facilitate dynamic, contextually relevant conversations, have significantly reshaped human-computer interaction across diverse domains (Hong, 2023). As higher education institutions face the challenges of personalization, learner autonomy, and instructional efficiency, artificial intelligence is increasingly being adopted not merely as a technological innovation but as

a transformative pedagogical tool that augments traditional teaching methods through adaptive, data-driven, and personalized learning approaches (Deri et al., 2024).

OpenAI's ChatGPT has gained increasing traction in higher education due to its accessible, natural language interface, which allows both instructors and students to engage with AI technologies for diverse academic tasks such as content generation, personalized feedback, and study support—without the need for technical expertise (Domenech, 2023). In English as a Foreign Language (henceforth EFL) writing instruction, ChatGPT has been widely utilized to support students across multiple stages of the writing process, including brainstorming ideas, generating initial drafts, revising content, and receiving real-time feedback, thereby facilitating cognitive engagement and writing development (Boudouaia et al., 2024; Su et al., 2023). These writing tools have been recognized for enhancing clarity, supporting the structuring of complex ideas, and facilitating analytical communication, thereby serving as valuable resources in the improvement of academic writing practices (Fiorillo, 2024). This is relevant in EFL settings, where learners frequently encounter compounded linguistic and cognitive challenges, particularly when attempting to master genre-specific writing conventions that require the integration of grammatical accuracy, lexical precision, and rhetorical structure (Robillos, 2023).

As English-medium tertiary education gains global prominence, proficiency in academic English writing has become an increasingly vital competency for non-native speaker students navigating the demands of international higher education (Morrison & Evans, 2018; Murray, 2015). The global emphasis on written communication as a core academic and professional competency has led to increased institutional efforts to assess and improve writing proficiency, as reflected in initiatives like the OECD's AHELO project and widespread endorsement by higher education leaders and employers (OECD, 2012; Sparks et al., 2014). Consequently, the integration of AI-powered writing tools such as ChatGPT in ESL instruction has generated both enthusiasm for their ability to enhance learner autonomy and writing proficiency, and caution due to concerns about contextual accuracy, reduced creativity, and ethical implications (Abduljawad, 2025; Raheem et al., 2023; Yan, 2023).

Since its public release in late 2022, ChatGPT has played a transformative role in writing instruction by prompting educators and researchers to reconceptualize traditional pedagogical practices, particularly within EFL contexts, where it is now widely recognized as a catalyst for innovation in teaching and learning (Barrot, 2023; Kohnke et al., 2023; Teng, 2024a). Traditional feedback practices in EFL writing pedagogy, typically grounded in teacher feedback, are increasingly being augmented by AI-generated feedback, which offers immediate, scalable, and context-aware responses that complement and, in some cases, reshape conventional revision processes (Tran, 2025). Recent research highlights a pedagogical shift in which educators are reevaluating the sequencing and roles of teacher and machine feedback in writing instruction, with growing interest in hybrid models that integrate automated writing evaluation tools alongside traditional feedback to enhance

instructional effectiveness (Kawashima, 2023). The integration of AI into academic writing practices marks a pivotal transformation in educational paradigms, prompting a rethinking of how writing is taught and assessed within increasingly digital and linguistically diverse academic contexts (Bahroun et al., 2023; Malik et al., 2023).

1.2 The Role of ChatGPT in developing academic English writing skills

ChatGPT, a large-scale language model developed using advanced natural language processing techniques, offers valuable and context-aware feedback that supports students in improving various dimensions of academic English writing, including grammar, coherence, and idea development, particularly within EFL contexts (S. M. Alanazi et al., 2025). Some of its benefits is that it has demonstrated effectiveness in providing immediate, personalized feedback on grammar, vocabulary, and sentence structure, which supports learners' writing development and fosters greater accuracy and fluency in English academic communication (Khzouz et al., 2024). Unlike conventional feedback systems that are often delayed due to instructor workload, ChatGPT provides immediate, tailored evaluations on grammar, vocabulary, and structure, thereby facilitating real-time, self-directed writing improvement for EFL learners (Huang, 2023). The interactive, question-based design facilitates iterative engagement and reflection, enabling learners to organize their thoughts, comprehend complex writing techniques, and develop greater awareness of academic writing conventions and stylistic features (Kanwal, 2025; Meyer et al., 2023; Synekop et al., 2024). By serving as an accessible, real-time writing assistant, ChatGPT supports self-directed learning by enabling learners to independently engage in brainstorming, drafting, and revising tasks—processes that reflect key principles of learner-centered pedagogy through personalized interaction and strategic autonomy (C. Wang et al., 2024).

Beyond error correction, ChatGPT has demonstrated significant potential as a tool for enhancing idea generation and conceptual development in design-related tasks, particularly by enabling users to produce a greater number of concepts compared to traditional methods (Filippi, 2023). Students in higher education frequently struggle to initiate composition writing tasks, particularly due to challenges in generating ideas and brainstorming relevant topics, a difficulty well-documented among Omani learners in both quantitative and qualitative findings (Balida & Alhabsi, 2024). ChatGPT has demonstrated potential in supporting novice writers by generating titles, drafting outlines for introductions, and offering content suggestions that help organize and structure academic writing tasks (Mondal & Mondal, 2023). In EFL contexts, students' limited linguistic competence can often hinder their ability to generate coherent and original ideas in writing, underscoring the value of pre-writing activities that support idea development (Etemadzadeh et al., 2013; Rashid & Quereshi, 2024). ChatGPT contributes to the development of both language proficiency and critical thinking by providing personalized prompts, modeling academic language, and fostering student engagement through flexible feedback that supports analytical reasoning and idea generation (Dwivedi et al., 2023; Guo & Lee, 2023; Xiao & Zhi, 2023). By simulating multiple viewpoints on a given issue,

learners engage in deeper analytical reasoning and develop more persuasive and context-sensitive arguments (Greco Morasso, 2009).

In EFL writing classrooms, ChatGPT functions as a supplementary feedback tool that enhances affective and behavioral engagement, thereby supporting differentiated learning processes and fostering sustained student involvement in revision tasks (Huang & Teng, 2025; Teng, 2024b). In contexts where individualized instruction is limited, such as large or resource-constrained classrooms, assistive technologies offer students with learning disabilities equitable access to writing support, fostering academic independence and mitigating disparities in educational opportunities (F. E. Alanazi & Abdulkader, 2024). Graduates learning English as a second language perceived AI-powered writing tools as beneficial for enhancing vocabulary and grammatical accuracy, particularly when integrated with teacher-guided instruction that emphasizes collaborative revision over generative use (Milton et al., 2024). ChatGPT serves not merely as a generative tool but as a cognitive scaffold that supports EFL learners throughout the writing process: facilitating idea generation, planning, organization, and refinement from the initial drafting stages to final submission (Alamri et al., 2025).

However, the growing reliance on ChatGPT in academic settings has also sparked debate among educators and institutions. Concerns about academic integrity have intensified with the rise of generative AI tools like ChatGPT, as empirical evidence demonstrates that even experienced educators struggle to reliably distinguish AI-generated texts from student-authored essays, particularly when the latter are well written (Waltzer et al., 2023). Educators have raised concerns that the increasing reliance on AI tools by students may serve as a means to bypass the cognitive demands of academic tasks, thereby undermining critical thinking development and authentic skill acquisition (Chavez et al., 2024). While educators acknowledge ChatGPT's potential to reduce instructional burdens through automated feedback and personalized support, they also express concern about its impact on academic integrity, critical thinking development, and the reliability of student assessment practices (Isiaku et al., 2024). Additionally, in response to concerns surrounding bias, plagiarism, and the erosion of academic integrity, researchers have recommended the development of institutional guidelines, AI literacy training for educators, and curriculum redesigns that equip students with the skills to critically engage with AI-generated content (Ali et al., 2024). Ultimately, the pedagogical utility of ChatGPT is contingent not merely on its technical affordances, but on its integration into instructional design processes that incorporate ethical safeguards, ensure alignment with learning objectives, and retain human expertise to support student-centered learning and intellectual development (Conklin et al., 2024).

1.3 Research problem

The integration of generative AI tools such as ChatGPT into writing instruction has garnered increasing attention due to their capacity to deliver immediate, iterative

feedback and to support student revision efforts, particularly in the early stages of the writing process where timely input can motivate further development (Steiss et al., 2024). Although the adoption of ChatGPT in EFL contexts has grown rapidly since its public release, empirical investigations into its pedagogical integration remain scarce, with existing literature largely limited to theoretical discussions and perception-based studies (Urazbayeva et al., 2024). Although empirical studies have demonstrated that technology-enhanced collaborative writing (TECW) can promote learner engagement, lexical development, and writing autonomy, concerns persist regarding its potential to encourage superficial participation, limit deeper cognitive engagement, and weaken collaborative responsibility when not properly implemented (Zhang & Zou, 2022). With the recent emergence of generative AI tools like ChatGPT, these concerns are further amplified, as such tools may streamline writing processes while simultaneously raising new questions about learner abilities, critical thinking, and the authenticity of collaborative authorship. As AI becomes more embedded in higher education, institutions are increasingly challenged to harness its pedagogical advantages, while simultaneously addressing ethical concerns related to data privacy, algorithmic bias, equitable access, and faculty readiness (Alotaibi, 2024).

While interest in ChatGPT's role in academic writing has grown rapidly, current scholarship remains largely fragmented, with a predominance of editorials and limited empirical studies that fail to offer comprehensive, comparative insights into its pedagogical impact across varied learning contexts (J. Wang et al., 2024). Current research on ChatGPT in education remains predominantly theoretical, with limited empirical studies offering systematic analyses grounded in pedagogical frameworks, reflecting the nascent stage of its implementation in academic contexts (Montenegro-Rueda et al., 2023). Moreover, few investigations have attempted to synthesize findings across multiple educational contexts in a way that illuminates both the affordances and limitations of ChatGPT in structured academic writing instruction. This gap is especially noticeable in research on EFL learners, where the combined demands of supporting language development, navigating digital tools, and adapting to shifting instructional roles create specific pedagogical challenges (Kats et al., 2024). These challenges highlight the need for more targeted training in both sociocultural awareness and the effective use of educational technologies. As AI-powered writing tools become increasingly embedded in academic writing processes, it is essential to examine how their use influences students' writing behaviors, attitudes toward academic integrity, and long-term development of writing competencies (Malik et al., 2023).

This study addresses this gap by conducting a systematic review of 19 peer-reviewed articles published between 2023 and 2024, each focused on the integration of ChatGPT into academic writing pedagogy. By critically analyzing these studies through the lens of constructivist, sociocultural, and cognitive load theories, this research seeks to unpack both the promise and peril of ChatGPT as a pedagogical tool. It aims to provide a more nuanced understanding of how AI-driven writing support is being deployed, received, and evaluated within higher education, especially in multilingual and EFL contexts.

2. Research objectives

In response to the evolving landscape of academic writing instruction and the growing integration of generative AI tools such as ChatGPT, this study sets out to investigate the dual impact of this technology on pedagogical practices within higher education. Specifically, the research aims to explore how ChatGPT is being utilized to support the development of academic English writing skills, particularly among students in EFL settings. The objective is to move beyond anecdotal claims and isolated case studies by offering a systematic review of existing literature that examines the pedagogical functions, benefits, and risks associated with ChatGPT in academic contexts.

Central to this inquiry is an examination of how ChatGPT supports learners through various stages of the writing process, including brainstorming, drafting, revising, and receiving feedback, and whether these affordances contribute to genuine improvements in writing proficiency and learner autonomy. At the same time, the study aims to identify the challenges that may arise from ChatGPT's integration into writing pedagogy, such as overreliance on AI-generated content, the risk of academic dishonesty, and concerns about the erosion of critical thinking and originality. By synthesizing findings from 19 peer-reviewed studies, this research seeks to assess the broader impact of ChatGPT on writing instruction across different educational settings, with particular attention to its influence on teaching strategies, student behavior, and assessment practices.

Ultimately, the goal of this study is to offer a balanced, theory-informed perspective on the role of ChatGPT in academic writing pedagogy. It seeks to provide educators, policymakers, and curriculum designers with evidence-based insights into how AI tools can be ethically and effectively integrated into instructional frameworks to support student learning while safeguarding academic integrity. In doing so, the study contributes to the emerging field of AI-mediated pedagogy by articulating clear, research-driven objectives that address both the transformative potential and the pedagogical risks of ChatGPT in contemporary higher education.

3. Research questions

This study is guided by the following research questions:

1. How does ChatGPT support the development of academic English writing skills, particularly in terms of idea generation, drafting, revision, and personalized feedback?
2. What are the key challenges and risks associated with the use of ChatGPT in academic writing pedagogy, especially concerning academic integrity, critical thinking, and student dependency?
3. How is the integration of ChatGPT influencing instructional design, teacher roles, and assessment practices in EFL-oriented academic writing programs?

4. Significance of the study

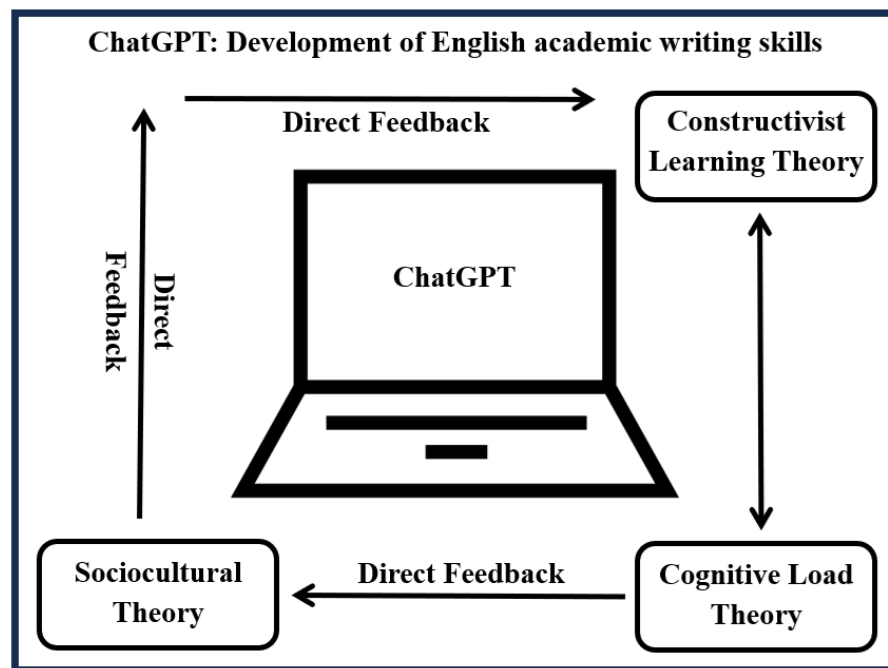
This study holds both theoretical and practical significance for educators, researchers, curriculum developers, and institutional policymakers navigating the integration of artificial intelligence in higher education. Theoretically, it contributes to the growing discourse on technology-enhanced learning by examining the dual roles that ChatGPT can play as both a pedagogical aid and a potential disruptor within academic writing instruction. By synthesizing evidence from 19 peer-reviewed Scopus-indexed studies and framing the analysis within constructivist, sociocultural, and cognitive load theories, the research offers a conceptual model for understanding how AI-driven writing tools mediate student learning experiences, particularly in multilingual and EFL settings. It advances scholarly knowledge on the intersection of generative AI and writing pedagogy by identifying key instructional affordances, pedagogical risks, and institutional considerations.

Practically, the findings of this study offer valuable insights for educators seeking to utilize ChatGPT in ways that enhance student engagement, foster autonomy, and improve writing performance while maintaining academic standards. The research sheds light on how ChatGPT can be used to provide scalable feedback, stimulate critical thinking, and support diverse learners in navigating complex writing tasks. At the same time, it provides evidence-based warnings about overreliance, ethical misuse, and assessment challenges, prompting the need for clear guidelines, teacher training, and the promotion of AI literacy among students. As academic institutions increasingly integrate AI tools into their digital learning ecosystems, this study informs the development of responsible, inclusive, and pedagogically sound approaches to AI-enhanced instruction. Ultimately, it supports the design of academic writing programs that prepare learners not only to write effectively but to think critically and act ethically in AI-mediated learning environments.

5. Theoretical Framework

To conceptually ground this study, Figure 1 (below) presents a theoretical framework that integrates three foundational perspectives: constructivist learning theory, sociocultural theory, and cognitive load theory. Together, these theories provide a lens for analyzing how ChatGPT mediates academic writing development, particularly within EFL contexts. Constructivist learning theory emphasizes learner autonomy and engagement through iterative interaction with AI-generated feedback; sociocultural theory situates ChatGPT as a scaffolded support mechanism that mirrors the role of a more knowledgeable other; and cognitive load theory explains how the tool can reduce extraneous cognitive demands to optimize students' working memory during complex writing tasks. This framework not only informs the analysis of the 19 reviewed studies but also illuminates the pedagogical opportunities and risks associated with ChatGPT integration in higher education writing instruction.

Figure 1: A Theoretical Framework for ChatGPT-Supported Academic Writing Pedagogy



5.1 Constructivist learning theory

Constructivist learning theory, as applied in contemporary educational contexts, emphasizes the importance of learners actively building knowledge through engagement with meaningful, real-world tasks and social interaction, rather than passive memorization, thereby fostering deeper cognitive development and experiential understanding (Moreno et al., 2007). Within this paradigm, ChatGPT, as a generative AI tool, supports student learning by providing personalized and interactive responses that facilitate task completion, structural organization, and stylistic refinement, thereby enhancing active engagement with academic content (Sen & Deng, 2025). Its real-time corrective feedback facilitates an iterative writing process, enabling students to progressively revise and refine their work through immediate implementation of suggestions and sustained engagement with their texts (Alanazi et al., 2025). In this way, ChatGPT supports the principles of constructivist pedagogy by fostering learner autonomy, promoting self-directed revision, and facilitating exploratory engagement with writing tasks through real-time, personalized feedback (Abduljawad, 2025).

5.2 Vygotsky's sociocultural theory

Complementing this is Vygotsky's sociocultural theory which underscores that cognitive development originates through culturally and historically situated social interactions, with the Zone of Proximal Development (henceforth ZPD) conceptualized as the distance between what a learner can do independently and what can be achieved with

guided support from more capable others (Eun, 2017; Vygotsky, 1978). When thoughtfully integrated into instructional contexts, ChatGPT can function as an adaptive support system that emulates elements of peer or tutor scaffolding by offering personalized guidance aligned with self-regulated learning processes, thereby assisting learners as they transition toward greater independence (Hartley et al., 2024). In EFL academic writing contexts, ChatGPT serves as an accessible and responsive linguistic scaffold by providing real-time feedback, structural modeling, and contextual language support, which students perceive as enhancing their ability to express ideas with greater coherence and precision across planning, composition, and revision stages (Xu & Jumaat, 2024). This interactive support enables learners to engage with academic discourse conventions they might otherwise struggle to access independently, thereby enhancing both language acquisition and genre awareness.

5.3 Cognitive load theory

Cognitive Load Theory, which emphasizes the need to align instructional design with the limits of working memory, offers a valuable framework for understanding how tools like ChatGPT can reduce germane cognitive load (the mental effort devoted to processing, understanding, and integrating new information) and support more efficient learning processes in higher education settings (Avello-Martínez et al., 2024; Klepsch et al., 2017; van Gog et al., 2010). Writing in a second language is a cognitively demanding task that requires learners to coordinate multiple linguistic subskills, including grammatical competence, vocabulary knowledge, and content organization, to produce coherent texts, with research highlighting these skills as significant predictors of writing quality (Saeed et al., 2022). By minimizing extraneous cognitive load, such as the effort required for low-level tasks like error correction or format adjustments, learners can better allocate their limited working memory capacity toward cognitively demanding processes essential for deep learning, such as abstraction, organization, and schema construction (de Jong, 2010). In doing so, the tool can help maintain learner engagement and reduce frustration, particularly for novice writers or those navigating unfamiliar academic genres.

5.4 Summary

Together, these three theories not only underpin the rationale for integrating ChatGPT into writing instruction but also inform the analytic approach of this study. The review of 19 peer-reviewed Scopus-indexed articles was guided by theoretical considerations derived from these frameworks, with specific attention to how ChatGPT-mediated writing support aligns with principles of learner-centered pedagogy, sociocognitive scaffolding, and cognitive efficiency. By situating the discussion within this multi-theoretical perspective, the study seeks to provide a balanced and pedagogically grounded evaluation of the tool's potential and limitations in contemporary academic writing classrooms.

6. Research Methodology

6.1 Scope and Study Design

This study employed a systematic literature review methodology to explore the dual role of ChatGPT in academic writing pedagogy. The choice of this design was guided by the need to synthesize a growing yet fragmented body of literature and to critically evaluate the pedagogical implications of integrating ChatGPT into writing instruction, particularly in EFL contexts. The scope of the review was limited to Scopus-indexed peer-reviewed journal articles published between January 2023 and March 2024. This time frame corresponds to the immediate academic response following the public release of ChatGPT in November 2022 (Kaczorowska-Spychalska et al., 2024), thus capturing its earliest and most dynamic applications in higher education. The review sought to include both empirical and theoretical studies that offered substantial insights into how ChatGPT supports or challenges academic writing instruction in tertiary-level educational settings.

6.2 Search Strategy and Databases

For this study, all 19 research papers, listed in Appendix A with a brief summary of their findings, were obtained exclusively from the Scopus website. No articles were sourced from any other database or website. The decision to rely solely on Scopus-indexed papers was made to uphold the advanced academic standards of this study. A focused search was conducted using Boolean combinations, which is a query method that uses logical operators like AND, OR, and NOT to retrieve documents based on the exact presence or absence of specified index terms (Salton et al., 1983) of relevant keywords such as “ChatGPT,” “academic writing,” “AI in education,” “writing instruction,” and “EFL writing pedagogy.” Filters were applied to ensure the selection of peer-reviewed articles published in English within the specified time frame. After screening duplicates and relevance based on title, abstract, and full-text content, 19 articles from Scopus were retained for analysis.

6.3 Inclusion and Exclusion Criteria

To ensure consistency and relevance, a set of inclusion and exclusion criteria was applied, listed in Appendix B. Scopus-indexed studies were included if they (1) were published between January 2023 and March 2024, (2) focused explicitly on the use of ChatGPT in academic writing instruction, (3) were situated in higher education contexts, and (4) presented pedagogical findings, applications, or implications. Studies were excluded if they (1) addressed AI applications unrelated to writing or pedagogy, (2) lacked a clear focus on instructional contexts (e.g., general discussions of AI capabilities), or (3) were non-peer-reviewed publications such as blogs, editorials, or opinion pieces. After this rigorous screening process, a total of 19 articles were deemed eligible for inclusion in the final analysis.

6.4 Data Extraction and Analysis

A structured data extraction matrix was developed to collect relevant information from each of the 19 selected studies. This included the author(s), year of publication, country or institutional context, methodological approach, participant demographics (if applicable), pedagogical use of ChatGPT, reported benefits, noted challenges, and broader implications for writing instruction. Once extracted, the data were analyzed using a thematic synthesis approach. Thematic categories were guided by the study's research questions and theoretical framework, resulting in three core dimensions: pedagogical benefits (e.g., personalized feedback, enhanced engagement), pedagogical challenges (e.g., academic integrity concerns, cognitive dependency), and practical instructional applications (e.g., use in feedback loops or revision stages). The thematic synthesis allowed for both deductive coding based on theoretical concepts and inductive emergence of patterns from the reviewed literature.

6.5 Link Between Theoretical Framework and Methodology

The theoretical framework, comprising constructivist learning theory, sociocultural theory, and cognitive load theory, was integral to the design and analysis of this review. Constructivist principles guided the identification of studies highlighting learner autonomy, personalized feedback, and iterative writing development facilitated by ChatGPT. Grounded in Bandura's Social Cognitive Theory, ChatGPT can function as an interactive agent that facilitates scaffolded support through reciprocal feedback loops, enabling learners to internalize AI-generated guidance and engage in cognitively meaningful learning processes such as attention, perception, and memory (Naz & Robertson, 2024). Cognitive load theory supported the categorization of findings related to how ChatGPT reduces or redistributes cognitive processing during complex writing tasks. These theoretical lenses did not only inform the coding and categorization of findings but also helped frame the discussion on how ChatGPT reshapes the writing process, student agency, and teacher roles in higher education contexts. By anchoring the methodology in pedagogical theory, the study ensures that its findings are not only descriptive but also analytically robust and educationally meaningful.

7. Results

This section presents the findings of a systematic review of 19 Scopus-indexed peer-reviewed articles published between 2023 and 2024, each exploring the integration of ChatGPT in academic writing pedagogy. Table 1 below summarizes the number of studies that addressed each pedagogical benefit and challenge.

Table 1: Frequency of Reported Pedagogical Benefits and Challenges of ChatGPT in the 19 Reviewed Studies

Category	Subtheme	Number of Studies (N=19)
Pedagogical Benefits	Personalized Academic Support	13
	Idea Generation and Research Scaffolding	11
	Enhanced Learner Autonomy and Engagement	10
	Equity and Accessibility	5
Pedagogical Challenges	Academic Integrity and Ethical Risks	3
	Overreliance and Cognitive Dependency	3
	Information Accuracy and Reliability	3
	Diminished Creativity and Critical Thinking	2

7.1 Advantages of ChatGPT in Academic Writing Pedagogy

7.1.1 Personalized Academic Support

13 (out of the 19) studies reported that ChatGPT provides real-time, individualized academic support that enhances students' writing development. The tool was frequently cited as a grammar and syntax assistant, offering personalized feedback that is immediate, consistent, and accessible at any time. This function was found to be especially beneficial for EFL students who face linguistic barriers and have limited access to timely instructor feedback (Guleria et al., 2023; Johnston et al., 2024; Mahyoob et al., 2023). ChatGPT's capacity to function as a 24/7 writing tutor also allows educators in large classrooms to supplement feedback and support learner progress more effectively (Altmäe et al., 2023).

7.1.2 Idea Generation and Research Scaffolding

11 (out of the 19) reviewed studies emphasized ChatGPT's utility in the early stages of the writing process, including topic selection, brainstorming, and outlining. The tool helps students initiate academic tasks by offering examples of thesis statements, research questions, and argumentative frameworks (Bašić et al., 2023; Bhatia, 2023; Weidmann, 2024). In research-heavy writing contexts, ChatGPT was also reported to help learners build foundational understanding of complex topics before consulting more scholarly sources (Mahapatra, 2024; Uzum et al., 2020). This support aligns with constructivist principles of scaffolding and gradually increasing task complexity.

7.1.3 Enhanced Learner Autonomy and Engagement

10 (out of the 19) studies highlighted how ChatGPT promotes greater learner autonomy and student engagement. By allowing users to interact with AI in iterative and

dialogic ways, students can independently revise and improve their work without relying solely on teacher intervention (Meyer et al., 2023; Mondal & Mondal, 2023). The responsive nature of ChatGPT encourages experimentation, self-correction, and deeper reflection on the writing process. In some cases, it also fostered collaboration among students who shared prompts and discussed outputs (Alberth, 2023; Daskaliuk & Zimba, 2023).

7.1.4 Equity and Accessibility

Equity and accessibility emerged as a notable theme across 5 (out of the 19) studies. ChatGPT was described as an assistive technology that levels the playing field for students with disabilities or limited academic support resources (Buruk, 2023; Mahyoob et al., 2023). Its accessibility via smartphones and low-cost digital devices makes it a viable tool for underserved populations in both developing and developed educational contexts. This advantage is particularly significant in multilingual classrooms where instructional differentiation can be difficult to implement consistently (Dergaa et al., 2023).

7.2 Disadvantages of ChatGPT in Academic Writing Pedagogy

7.2.1 Academic Integrity and Ethical Risks

A recurring concern in the literature (3 out of the 19 studies) pertains to academic dishonesty and ethical misuse of ChatGPT. Several studies warned that students may use the tool to generate entire essays or assignments without engaging in the writing process themselves (Johnston et al., 2024; Khalifa & Albadawy, 2024). This poses a serious threat to academic integrity, as the distinction between student-authored and AI-generated content becomes increasingly difficult to enforce. Educators expressed the urgent need for clear guidelines and AI-use policies to safeguard learning outcomes and assessment fairness (Song & Song, 2023).

7.2.2 Overreliance and Cognitive Dependency

Another critical drawback identified in 3 (out of 19) reviewed studies is the risk of overreliance on AI assistance. When students become too dependent on ChatGPT, they may bypass critical stages of learning, such as synthesizing information, forming arguments, and editing their work (Mahapatra, 2024; Marchandot et al., 2023). This cognitive outsourcing can hinder the development of core academic skills and reduce motivation to engage with more challenging aspects of writing. In some contexts, students admitted to relying on the tool not just for support, but for full-scale content generation (Bom, 2023).

7.2.3 Information Accuracy and Reliability

Although ChatGPT is capable of generating academic-style content, 3 (out of the 19) studies reported that the tool occasionally produces inaccurate, misleading, or fabricated information (Altmäe et al., 2023; Mahyoob et al., 2023). This raises concerns about students incorporating unverified content into their academic work, especially when they are unable to critically evaluate the credibility of AI-generated responses. The tool's lack of transparency in sourcing and citation further complicates its reliability in academic contexts (Dergaa et al., 2023).

7.2.4 Diminished Creativity and Critical Thinking

A final theme emerging from the analysis concerns the potential impact of ChatGPT on students' creative and analytical abilities. 2 (out of the 19) studies found that while the tool helps with structure and clarity, it may also lead students to adopt formulaic writing styles and reduce originality in their work (Buruk, 2023; Mondal & Mondal, 2023). There is a risk that learners may internalize the patterns suggested by ChatGPT without questioning or critically engaging with the content. As a result, the tool could inadvertently limit the development of higher-order thinking skills, which are central to academic writing and intellectual growth.

To provide more concrete examples of classroom use, Appendix C presents sample prompts designed to facilitate academic writing with ChatGPT across various instructional stages.

8. Discussion

This section discusses the key findings of the systematic review in relation to the research questions and theoretical framework, drawing on evidence from the 19 peer-reviewed articles and integrating insights from both the introduction and theoretical framework. The discussion is structured to unpack how ChatGPT influences EFL academic writing pedagogy through pedagogical support, ethical considerations, and instructional transformation.

8.1 Interpretation of Key Findings in Relation to Research Questions

RQ1: How does ChatGPT support the development of academic English writing skills, particularly in terms of idea generation, drafting, revision, and personalized feedback?

ChatGPT has demonstrated considerable utility in supporting academic English writing by facilitating various stages of the writing process. Findings from the reviewed

articles reveal that ChatGPT aids in idea generation by offering examples, topic suggestions, and outlines that stimulate critical engagement and support pre-writing activities (Bašić et al., 2023; Weidmann, 2024). The tool's real-time, personalized feedback, particularly on grammar, vocabulary, and syntactic coherence, allows learners to iteratively refine their work, thereby promoting self-regulated learning and sustained engagement with revision (Alanazi et al., 2025; Johnston et al., 2024). Moreover, ChatGPT serves as a formative assessment tool, enabling students to receive feedback without waiting for instructor intervention, which is particularly valuable in large EFL classrooms (Altmäe et al., 2023; Huang, 2023). This continuous interaction with AI feedback aligns with constructivist principles of knowledge building and supports learner autonomy, particularly among students who face linguistic challenges (Khizouz et al., 2024; Robillos, 2023).

RQ2: What are the key challenges and risks associated with the use of ChatGPT in academic writing pedagogy, especially concerning academic integrity, critical thinking, and student dependency?

Despite its pedagogical affordances, ChatGPT introduces substantial risks. Academic integrity emerged as a principal concern, with several studies indicating that students may use the tool to bypass original thinking by submitting AI-generated content as their own (Khalifa & Albadawy, 2024; Song & Song, 2023). This compromises assessment validity and undermines the educational process. Moreover, overreliance on AI-generated suggestions can lead to cognitive dependency, wherein students outsource analytical and organizational tasks to the tool rather than engaging deeply with the writing process (Bom, 2023; Mahapatra, 2024). This dependence potentially inhibits the development of critical thinking and creativity, core competencies in academic writing (Buruk, 2023; Mondal & Mondal, 2023). Furthermore, the inaccuracies and fabricated content occasionally produced by ChatGPT pose risks when students lack the critical literacy to evaluate source reliability (Altmäe et al., 2023). These challenges underscore the necessity for AI literacy education, ethical usage guidelines, and a balanced integration of AI within instructional frameworks (Ali et al., 2024; Conklin et al., 2024).

RQ3: How is the integration of ChatGPT influencing instructional design, teacher roles, and assessment practices in EFL-oriented academic writing programs?

The integration of ChatGPT has prompted a reevaluation of traditional instructional design and teacher roles. Educators are increasingly adopting hybrid feedback models that incorporate both AI-generated and teacher feedback, thus redefining their role from sole content evaluator to strategic learning facilitator (Kawashima, 2023; Tran, 2025). Instructional practices now emphasize AI-assisted drafting and revision stages, encouraging learners to iteratively improve their texts before formal submission (Su et al., 2023; Teng, 2024b). This has influenced assessment practices, necessitating clearer delineations of acceptable AI use and increased emphasis on process-based writing

assessments. The role of instructors has also expanded to include guiding students in critically interpreting AI feedback, fostering metacognitive awareness, and modeling ethical engagement with generative tools (Isiaku et al., 2024). Overall, the pedagogical landscape is shifting toward a more collaborative, student-centered model that leverages AI as a cognitive partner within EFL writing pedagogy.

8.2 Discussion in Relation to Literature

8.2.1 Association of ChatGPT with listed theories

The theoretical foundations of constructivism, sociocultural theory, and cognitive load theory provide a robust framework for interpreting the study's findings. These paradigms explain how ChatGPT supports the writing process by enhancing learner agency, providing scaffolded support, and reducing extraneous cognitive demands.

Constructivist learning theory

Constructivist learning theory emphasizes active learner engagement and knowledge construction through meaningful tasks and feedback. The reviewed studies affirm that ChatGPT enables iterative writing processes, facilitating the generation, organization, and refinement of ideas (Meyer et al., 2023; Sen & Deng, 2025). Its dialogic interface fosters self-directed learning and exploratory engagement with content, particularly in EFL settings where learners may lack confidence or language proficiency (Kanwal, 2025). As Abduljawad (2025) and Alanazi et al. (2025) argue, such autonomy is integral to fostering deep cognitive engagement and critical reflection, thus aligning well with constructivist pedagogy.

Vygotsky's sociocultural theory

According to Vygotsky's sociocultural theory, learning occurs within social contexts and is mediated through interactions with more knowledgeable others. ChatGPT functions analogously by offering adaptive support that guides learners through their ZPD (Eun, 2017; Hartley et al., 2024). This was particularly evident in how students utilized ChatGPT to refine their arguments and receive modeling of academic discourse conventions (Xu & Jumaat, 2024). Its ability to provide immediate, context-aware assistance supports cognitive internalization and helps students gradually transition from dependent to independent writing performance, a hallmark of sociocultural development (Vygotsky, 1978).

Cognitive learning theory

Cognitive load theory underscores the necessity of minimizing extraneous cognitive demands to optimize learning efficiency. ChatGPT was shown to alleviate

burdens related to low-level tasks such as grammar correction and formatting, thereby freeing cognitive resources for higher-order processes like synthesis, evaluation, and organization (Avello-Martínez et al., 2024; Klepsch et al., 2017). By reducing extraneous load, particularly for novice EFL writers, ChatGPT enables learners to better manage complex academic writing tasks, enhancing engagement and performance (de Jong, 2010; Saeed et al., 2022).

8.2.2 Insights Beyond Initial Expectations

An unexpected insight from this review was the extent to which ChatGPT fostered collaborative and peer-assisted learning dynamics. Although not explicitly designed for group interaction, students frequently shared AI outputs with peers for discussion, revision, and critique (Alberth, 2023; Daskaliuk & Zimba, 2023). This emergent behavior transformed ChatGPT from a solitary tool into a shared learning resource, suggesting potential for integration within peer-based pedagogical models. Another surprising outcome was the degree to which ChatGPT supported affective engagement. Several studies noted increased motivation, reduced writing anxiety, and enhanced confidence among students using the tool, especially in high-stakes academic settings (Huang & Teng, 2025; Kanwal, 2025). These psychosocial benefits indicate broader pedagogical implications extending beyond purely cognitive dimensions of writing instruction.

8.2.3 Implications and Recommendations

Practical Implications

Practically, this study suggests that educators should integrate ChatGPT into academic writing instruction in structured, ethical, and pedagogically sound ways. Training programs for both teachers and students are essential to develop AI literacy, critical evaluation skills, and awareness of academic integrity risks. Institutions should implement clear usage guidelines that delineate acceptable forms of AI support while promoting reflective and iterative engagement with the tool. Instructors should be encouraged to incorporate ChatGPT in formative feedback cycles, using it to supplement—not replace—teacher-led instruction.

Theoretical Contributions

Theoretically, this study extends existing frameworks by demonstrating how generative AI tools can be mapped onto constructivist, sociocultural, and cognitive load paradigms. The findings contribute to educational technology scholarship by articulating a model of ChatGPT as a semi-autonomous cognitive partner that scaffolds learning through dialogic engagement. Moreover, it expands the sociocultural theory application by

conceptualizing ChatGPT as a technologically mediated “more knowledgeable other” in EFL contexts.

8.2.4 Limitations of the Study

Despite its contributions, this study has several limitations. First, it is based exclusively on peer-reviewed, Scopus-indexed articles published between 2023 and 2024, which may have excluded pertinent studies from other reputable databases or earlier foundational works. Second, the analysis was limited to secondary data from published studies, which may not fully capture nuanced classroom interactions or real-time student experiences with ChatGPT. Third, the reviewed articles varied in methodological rigor, geographic representation, and disciplinary focus, thereby limiting the generalizability of the findings. Lastly, the study does not include empirical classroom observations or participant interviews, which could have enriched the contextual depth and triangulation of findings.

8.2.5 Future Research Directions

To further understand ChatGPT’s pedagogical role in academic writing instruction, future studies should adopt longitudinal research designs that capture the tool’s sustained impact on learners over extended periods, such as an academic semester or year. These studies should incorporate specific metrics, including changes in writing proficiency (as measured by rubric-based pre- and post-assessments), development of learner autonomy (assessed through self-assessment surveys and reflective journals), and cognitive engagement (tracked through iterative writing portfolios). Such metrics would allow researchers to systematically evaluate how ChatGPT contributes to academic development beyond surface-level writing corrections. Additionally, experimental or quasi-experimental designs could help isolate ChatGPT’s effects by comparing AI-assisted groups with control groups receiving traditional instruction. To guide future inquiry, the following research questions are proposed: (1) How does prolonged interaction with ChatGPT influence EFL learners’ critical thinking and writing autonomy over a semester? (2) In what ways does ChatGPT-mediated peer collaboration affect writing outcomes in multilingual classrooms? and (3) What metrics can effectively assess the pedagogical impact of ChatGPT compared to traditional feedback mechanisms? Finally, research should aim to establish standardized frameworks for evaluating cognitive, affective, and intercultural learning outcomes in AI-assisted environments. Such frameworks would support more reliable, ethical, and pedagogically sound integration of ChatGPT in academic writing instruction.

9. Conclusion

This systematic review has revealed that the integration of ChatGPT into academic writing pedagogy offers a complex interplay of pedagogical opportunities and ethical challenges. The evidence from 19 Scopus-indexed articles underscores ChatGPT’s

potential to enhance EFL learners' academic writing proficiency by supporting idea generation, drafting, revision, and personalized feedback. Simultaneously, the findings caution against overreliance on AI, which may compromise critical thinking, academic integrity, and student agency. By interpreting these findings through constructivist learning theory, sociocultural theory, and cognitive load theory, the study illuminates how ChatGPT functions as a generative, scaffolded, and cognitively efficient support system. Moreover, the observed psychosocial benefits and emergent collaborative uses of the tool suggest a broader impact on learner motivation and peer interaction than initially anticipated. However, limitations regarding data sources, methodological variability, and the absence of direct classroom observations point to the need for further empirical exploration. Moving forward, researchers and educators must work together to ensure ChatGPT's ethical and pedagogically sound integration into writing instruction. This includes developing clear usage guidelines, promoting AI literacy, and designing longitudinal studies that capture the evolving dynamics of AI-assisted learning. Ultimately, the study contributes to a more nuanced and theory-informed understanding of ChatGPT's role in shaping the future of academic writing pedagogy in EFL contexts.

10. Ethical Statement

This study adhered to the ethical standards of Rangsit University and the Journal of Educational Change. No live participants were involved, and no specific funding was received. The authors declare no conflicts of interest, and the study was conducted independently. Publicly available data, secondary data, or theoretical analysis were used, with proper citation and acknowledgment of original sources to maintain academic integrity. The data were anonymized and posed no risk to individuals or groups. This research complies with the ethical guidelines of the American Educational Research Association (AERA) and aims to uphold the integrity and credibility of the academic research community.

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APPENDIX A: SUMMARY OF THE 19 REVIEWED ACADEMIC PAPERS

No.	Paper Title	Positive Aspects	Negative Aspects
1	Student perspectives on the use of generative artificial intelligence technologies in higher education	Assistive Role: ChatGPT can serve as a valuable tool for grammar assistance, helping to correct and refine student writing which can be particularly beneficial for ESL students.; Conceptual...	Academic Dishonesty Risks: There's a significant concern that ChatGPT can be used for completing entire assignments, which undermines academic integrity and the educational process; Dependency:...
2	Impact of ChatGPT on ESL students' academic writing skills: a mixed methods intervention study	Formative Feedback: ChatGPT provides instant, need-based, and tailored feedback which is critical in formative assessment, enhancing students' writing skills over time; Improvement in Writing Skills:...	Creativity Constraints: Some students felt that ChatGPT might impose a certain pattern on their writing, possibly hindering their creative expression.; Dependency: There is a concern about students...
3	Using artificial intelligence in academic writing and research: An essential productivity tool	Communication, Outreach, and Ethical Compliance: It enhances the dissemination of research findings and ensures ethical compliance in research activities, including plagiarism detection and research...	Academic Integrity Concerns: There are challenges related to maintaining academic integrity and ensuring that AI-generated content does not replace human insight and creativity in research.; Accuracy...
4	Artificial intelligence in academic writing and clinical pharmacy education: consequences and opportunities	Advancements in Pattern Recognition: AI's ability to recognize patterns across large datasets can lead to new insights in fields like drug discovery, which can improve clinical decision-making and...	Academic Integrity Concerns: There are significant concerns about plagiarism and the authenticity of scholarly work when AI tools are used in academic writing. The blurring of lines between student...
5	ChatGPT in academic writing: Maximizing its benefits and minimizing the risks	Assistance in Various Writing Stages: ChatGPT can help with numerous tasks such as literature review, generating hypotheses, drafting different sections of papers, and even helping with data analysis...	Reliability and Accuracy Concerns: There are worries about the reliability of the content generated by ChatGPT, including the accuracy of data and the potential generation of fictitious references.;...
6	Academic Writing with GPT-3.5 (ChatGPT): Reflections on Practices, Efficacy and Transparency	Enhanced Accessibility: ChatGPT can assist those with limited writing skills or those who are non-native English speakers by helping them articulate their ideas more fluidly. This helps in reducing...	Bias and Inaccuracy: The paper mentions the inherent biases in AI systems, which could potentially propagate stereotypes or biased information. Additionally, there's a risk of inaccuracy in the...
7	ChatGPT-3.5 as writing assistance in students' essays	Educational Aid: ChatGPT can generate high-quality research papers, dissertations, and essays, which can serve as examples or starting points for students; Efficiency: It can help increase the...	Dependence on Tool: There is a risk that students might over-rely on AI tools, potentially reducing their ability to develop independent critical thinking and writing skills; Familiarity and...

No.	Paper Title	Positive Aspects	Negative Aspects
8	ChatGPT and large language models in academia: opportunities and challenges	Diverse Applications in Research and Learning: The model's flexibility and capacity to generate content can be leveraged to foster creativity, engage students, and improve research methodologies.;...	Bias in Generated Content: Like all large language models, ChatGPT can perpetuate biases present in its training data, which can skew academic work and reinforce stereotypes.; Ethical and Plagiarism...
9	ChatGPT: ethical concerns and challenges in academics and research	Aid in Generating Business Ideas: It can generate creative content like business ideas, which might be helpful in academic settings for entrepreneurship studies.; Streamlining the Writing Process:...	Creation of Inaccurate or Biased Content: The responses generated by ChatGPT can be based on biased or inaccurate information, reflecting the biases present in the training data.; Dependence and...
10	Exploring the Opportunities and Challenges of ChatGPT in Academic Writing: a Roundtable Discussion	Accessibility and Learning: The tool makes it easier to access information and can be an educational resource for those unfamiliar with specific topics.; Drafting and Structuring: ChatGPT can be used...	Attribution Issues: There is an ongoing debate about whether tools like ChatGPT should be credited as authors, given their lack of responsibility for potential errors.; Ethical Concerns: There's a...
11	Artificial intelligence in scientific writing: a friend or a foe?	Assistance in Drafting: ChatGPT can help scientists with material organization, draft creation, and proofreading, which are valuable in the research and publishing processes.; Data Analysis Guidance:...	Accuracy and Reliability Concerns: The generated content might not always be accurate or reliable, especially with fabricated data or incorrect statistical interpretations.; Dependency Risks:...
12	Early applications of ChatGPT in medical practice, education and research	Capability to Write Academic Abstracts: ChatGPT demonstrated the ability to produce research abstracts that were deemed acceptably written, which shows its utility in assisting with initial drafts or...	Formatting and Specificity Issues: Only a small percentage of ChatGPT-generated abstracts adhered to the strict formatting requirements of journals. The writing was also noted to be vaguer and more...
13	ChatGPT: the next frontier in academic writing for cardiologists or a Pandora's box of ethical dilemmas	Assistance in Writing and Editing: It offers support in the drafting and revision stages of manuscript preparation. ChatGPT can help identify and correct grammatical and spelling errors, suggest...	Ethical Concerns and Plagiarism: The use of AI in academic writing raises ethical questions, particularly concerning authorship and originality. There's a risk of plagiarism since ChatGPT might...
14	Enhancing academic writing skills and motivation: assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students	Enhancement of Writing Skills: ChatGPT helps improve various aspects of writing such as organization, coherence, grammar, and vocabulary. The AI provides real-time feedback, helping learners identify...	Contextual Accuracy Concerns: Sometimes, the feedback provided by ChatGPT may not be contextually accurate or may not align perfectly with the learner's intent or style. This requires users to...

No.	Paper Title	Positive Aspects	Negative Aspects
15	The use of ChatGPT in academic writing: A blessing or a curse in disguise	Accessibility and Efficiency: It is available around the clock, providing help with writing, brainstorming ideas, and structuring papers, which can be particularly helpful for novice writers or those...	Accuracy and Misinformation: ChatGPT may generate unreliable information, including incorrect data or biased content, which can mislead researchers and result in factual inaccuracies in academic...
16	A Proposed Framework for Human-like Language Processing of ChatGPT in Academic Writing	Human-like Responses: ChatGPT is capable of generating human-like text responses which are coherent and contextually relevant to the queries posed; Interactivity and Multiturn Dialogue: It maintains...	Authenticity and Factual Accuracy: ChatGPT sometimes generates nonfactual inferences, illogical reasoning, and even fake references. These errors can seriously mislead users and propagate incorrect...
17	ChatGPT for academic writing: A game changer or a disruptive tool?	Assistance in Academic Tasks: It can be used to perform tasks like summarizing texts and generating computer code, which can be particularly useful in managing large amounts of information and...	Bias and Misinformation: Like any AI trained on existing data, ChatGPT can perpetuate biases present in the training data, leading to outputs that could be biased or contain misinformation; Detection...
18	Beyond the Keyboard: Academic Writing in the Era of ChatGPT	Accessibility and Cost-Effectiveness: ChatGPT is a free tool that helps break down the linguistic barriers faced by non-Anglophone authors, providing them with an equal opportunity to present their...	Inadequacy for Sole Content Creation: While ChatGPT can assist in generating text and ideas, it is not suitable for producing academic content that requires deep research, critical thinking, and...
19	From human writing to artificial intelligence generated text: examining the prospects and potential threats of ChatGPT in academic writing	Efficiency in Academic Research: ChatGPT can process vast amounts of textual data quickly, automating tasks like scanning academic papers for important details such as authors, publication dates, and...	Ethical and Integrity Concerns: The potential for AI-generated content in scientific publications raises significant ethical concerns about the authenticity and credibility of academic work. There...

APPENDIX B: CRITERIA FOR CATEGORIZING STUDIES

No.	Criterion Category	Criteria Description
1	Publication and Indexing Criteria	Scopus-indexed, peer-reviewed articles published between Jan 2023 and Mar 2024.
2	Contextual Relevance	Focus on higher education, academic writing, and ChatGPT use, particularly in EFL or multilingual contexts.
3	Methodological Characteristics	Empirical (qualitative, quantitative, mixed) or theoretical/literature review studies with instructional relevance.
4	Thematic Focus Areas	Classified into pedagogical benefits, challenges, and instructional applications.
5	Alignment with Theoretical Frameworks	Evaluated based on alignment with constructivist, sociocultural, and cognitive load theories.
6	Reported Impact on Writing Development	Emphasis on effects of ChatGPT on writing proficiency, student autonomy, and critical thinking.

APPENDIX C: SAMPLE PROMPTS FOR IMPLEMENTING CHATGPT IN ACADEMIC WRITING INSTRUCTION

Stage of Writing	Purpose	Example Prompt	Pedagogical Benefit
Brainstorming	Generate topic ideas	Give me five research topics related to environmental sustainability.	Stimulates idea generation and pre-writing engagement
Thesis Development	Draft a central argument	Can you help me write a thesis statement about the impact of social media on teens?	Clarifies argument structure and promotes coherence
Outline Creation	Organize essay structure	Create a basic outline for a five-paragraph essay on climate change.	Supports logical organization and planning
Introduction Writing	Begin an essay	Write an engaging introduction for an essay on AI in education.	Provides model language and hooks for academic writing
Revision and Editing	Improve grammar and clarity	Can you revise this paragraph to improve clarity and coherence?	Enhances syntactic fluency and cohesion
Feedback Simulation	Get reader-response feedback	As a teacher, what feedback would you give on this essay paragraph?	Encourages self-reflection and peer-review awareness
Source Evaluation	Check the reliability of claims	Is this a reliable academic source: www.abc.com/	Promotes critical evaluation of information
Paraphrasing Practice	Improve paraphrasing skills	Paraphrase this academic sentence using simpler language.	Enhances academic integrity and vocabulary development
Conclusion Writing	Summarize main ideas	Write a conclusion that summarizes the key points of an essay on online learning.	Aids synthesis and closure in writing tasks