GENERATIVE AI IN L2 WRITING INSTRUCTION: A NARRATIVE LITERATURE REVIEW

ГЕНЕРАТИВНИЙ ШТУЧНИЙ ІНТЕЛЕКТ У НАВЧАННІ ПИСЬМУ ПРИ ВИВЧЕННІ ДРУГОЇ МОВИ: НАРАТИВНИЙ ОГЛЯД ЛІТЕРАТУРИ

UDC 378.811:004 DOI https://doi.org/10.32782/ip/85.2.40

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article presents a comprehensive narrative literature review of recent empirical and conceptual studies on the integration of generative artificial intelligence (GenAI) tools in second language (L2) writing instruction. Drawing on 31 peer-reviewed sources published between 2020 and 2025, the review explores how these technologies are reshaping pedagogical practices, learner engagement, feedback mechanisms, and academic integrity in multilingual writing contexts. It identifies a range of pedagogical affordances, including enhanced support, metacognitive prompting, increased learner scaffolding, autonomy, and workflow efficiency. However, the review also highlights critical concerns such as students' overreliance on AI-generated content, the erosion of authorial voice and rhetorical individuality, misinformation risks, plagiarism, and the absence of coherent institutional policies. To contextualize these issues, the article analyzes key conceptual models, collectively illuminating how GenAl use is framed in emerging scholarship and how it influences learners cognitive, affective, and ethical engagement with writing. The review further examines instructional models that promote responsible AI integration, including pedagogically staged AI use across the writing process, hybrid feedback mechanisms incorporating AI, teacher, and peer responses, and ecologically grounded approaches that align GenAl with local educational, ethical, and technological realities. Additionally, the article reviews institutional and ethical responses, including the creation of transparency protocols, Al-use disclosure guidelines, and professional development initiatives. The findings point to an urgent need for comprehensive teacher training, structured AI literacy programs, and interdisciplinary collaboration to ensure that GenAl integration in L2 writing is both effective and equitable. Future research directions are proposed, including longitudinal studies, crossinstitutional comparisons, and co-design efforts involving educators, developers, and learners. Key words: generative AI, second language writing, ChatGPT, AI literacy, critical digital

Ця стаття представляє вичерпний огляд літератури, присвяченої нещодавнім емпі-

literacies, academic integrity.

ричним і концептуальним дослідженням інтеграції інструментів генеративного штучного інтелекту (GenAI) у навчання письма другою мовою. Огляд базується на 31 рецензованому джерелі, опублікованому у 2020-2025 роках, відібраному за актуальність до тематики L2-письма та застосування GenAI. У роботі розглядається, як ці технології трансформують педагогічну практику, залучення студентів, механізми зворотного зв'язку та підходи до забезпечення академічної доброчесності в контексті навчання письма іноземною мовою. В огляді висвітлено низку переваг використання GenAI, зокрема посилену підтримку письма, емоційне підкріплення, розвиток автономії здобувачів освіти та підвишення ефективності викладання. Водночас критично осмислюються ключові виклики, такі як надмірна залежність від згенерованого контенту, розмиття авторського голосу, ризики дезінформації, етичні суперечності та прогалини в інституційній політиці. Окреслено провідні теоретичні підходи. які допомагають концептуалізувати використання GenAl в умовах багатомовного навчання письму. Особливу увагу приділено педагогічним стратегіям відповідальної інтеграції, зокрема поетапному впровадженню GenAI в процес письма, гібридним моделям зворотного зв'язку та екологічним підходам, що враховують контекстуальні, етичні й інституційні чинники. Також розглянуто етичні й адміністративні реакції на застосування GenAI, включно з розробкою політик прозорості, механізмів перевірки фактів і стандартів звітності. Результати огляду підкреслюють нагальну потребу у професійній підготовці викладачів, розвитку ШІ-грамотності та міждисциплінарній співпраці для забезпечення етичного й педагогічно обґрунтованого впровадження GenAl у сферу L2-письма. Окреслено перспективні напрями подальших досліджень, зокрема проведення поздовжніх студій, міжінституційних порівнянь і спільного проєктування за участю викладачів та розробників ШІ.

Ключові слова: генеративний штучний інтелект, письмо другою мовою, ChatGPT, грамотність у сфері штучного інтелекту, критична цифрова грамотність, академічна доброчесність.

Problem Statement. The rapid proliferation of generative artificial intelligence (GenAI) technologies such as ChatGPT has introduced unprecedented changes to the landscape of second language (L2) writing instruction. These tools now occupy a central role in how learners generate ideas, develop arguments, revise drafts, and evaluate their writing, prompting educators and researchers to reconsider foundational principles of writing pedagogy. While

early reactions ranged from excitement to alarm, there is now growing consensus that GenAl cannot simply be ignored or banned, it must be critically understood and thoughtfully integrated.

At the core of this transformation lies a pedagogical paradox: GenAl can democratize access to linguistic resources and personalized feedback, particularly for linguistically and academically marginalized learners, yet it also risks reinforcing dependence,

eroding authorial voice, and displacing essential cognitive and rhetorical skills. Educators are tasked with preserving human creativity, critical thinking, and ethical agency in an environment increasingly shaped by machine-generated language.

Despite a surge of research in applied linguistics, language education, and writing studies, the academic community still lacks a consolidated understanding of GenAl's implications for L2 writing instruction. Studies have examined discrete issues such as feedback efficacy, academic integrity, and student perceptions, but these findings remain fragmented across disciplines and often lack a unifying framework. As a result, teachers, administrators, and policymakers are left without clear guidance on how to harness GenAl's potential while mitigating its risks.

Compounding this problem is the fact that most institutional responses have been reactive rather than proactive—issuing restrictive policies or adopting detection tools without addressing the pedagogical and ethical complexities of GenAI use. Meanwhile, students are already using these technologies widely, often without sufficient digital or ethical literacy. The gap between everyday classroom practice and institutional policy continues to widen.

This literature review addresses this pressing need by synthesizing emerging empirical findings, conceptual models, and pedagogical frameworks related to GenAl in L2 writing. In doing so, it offers a comprehensive foundation for understanding how Al is reshaping the goals, methods, and ethics of writing instruction in multilingual educational contexts.

Purpose of the Study. The purpose of this article is to provide a narrative review of current research on the use of GenAl in L2 writing education. This review synthesizes empirical findings, theoretical frameworks, and pedagogical discussions from peer-reviewed articles to map the landscape of Al-supported L2 writing, identify critical themes and models, and propose future directions for research and instruction. The aim is to help educators, researchers, and policymakers understand both the potential and pitfalls of GenAl, and to encourage thoughtful, informed integration into writing pedagogy.

- 1. Affordances of GenAI in L2 Writing Instruction
- 1.1 Writing Support and Pedagogical Utility

Recent empirical research confirms that GenAl tools are transforming academic writing from a solitary, linear process into an iterative, interactive engagement between student writers and Al systems.

Studies by Lo et al. [16], Su et al. [22], and Du et al. [10] underscore GenAl's capacity to support idea generation, grammar correction, and revision. Zou et al. [31] describe how ChatGPT facilitates collaborative brainstorming and outlining, providing rich language input and alleviating writer's block. Ou et al. [19] emphasize its cognitive benefits for doctoral students, promoting strategic use of prompts and critical

self-reflection. Wang [25] adds a phenomenological perspective, showing how native and nonnative English speakers engage differently with ChatGPT across stages of writing, highlighting both empowerment and disorientation. Su et al. [22] further detail how ChatGPT can scaffold argumentative writing by serving as a "dialogic partner" and promoting meta-cognitive reflection during classroom collaboration.

Song et al. [21], working with Chinese EFL learners, show that ChatGPT supports multiple stages of composition, ranging from idea generation and drafting to lexical enrichment and revision. Their mixed-methods study found that students using AI-enhanced instruction performed significantly better in writing proficiency, particularly in areas such as coherence, organization, and vocabulary. Qualitative interviews revealed that learners began to view writing as a dynamic, collaborative process shaped by real-time AI feedback. However, concerns emerged regarding over-reliance and occasional contextual inaccuracy in AI suggestions, reinforcing the importance of critical scrutiny.

Taken together, these studies mark a paradigm shift in academic writing. GenAl tools are not merely supporting discrete aspects of composition but reshaping writing into a dialogic process where learners must navigate assistance and agency. Their transformative potential, however, depends on pedagogical framing, task design, and the extent to which students are equipped with the metacognitive tools to engage critically with Al output.

1.2 Efficiency, Confidence, and Affective Support

Cheng et al. [7] and Warschauer et al. [27] both emphasize the dual benefits of AI tools like ChatGPT in improving efficiency and offering affective support for L2 writers. Cheng highlights how generative AI enhances writing efficiency by streamlining ideation and structuring processes, with one participant noting a 50% reduction in writing time. Students also valued ChatGPT's quick, accurate, and timely responses, which made the writing process more engaging. Warshauer extends this by detailing Al's wide-ranging affordances from translation, paraphrasing, and genre adjustment to corpus search and grammar support, all of which reduce the cognitive and financial "tax" often experienced by L2 writers. In professional contexts, this efficiency translates into enhanced productivity, aligning with employer expectations.

Both studies also touch on how AI contributes to learners' confidence and emotional well-being. Cheng shows that students appreciate AI's non-judgmental nature, with one user stating they no longer feared asking "silly" questions, thus reducing social anxiety. Warshauer discusses how AI's ability to articulate ideas more fluently can empower L2 writers, though this may be offset by concerns over academic integrity and flawed AI detection tools, which can undermine confidence. To address this, Warshauer proposes AI

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literacy training to help students use these tools effectively and ethically, fostering long-term confidence and writing competence. In addition, Acosta-Enriquez et al. [1] demonstrate that students who regularly use ChatGPT also show higher emotional engagement and intention to verify output accuracy – factors that positively influence responsible usage behaviors.

Complementing these findings, Tokdemir Demirel [23] explored the AI writing practices of Turkish social science students, noting widespread adoption of tools like ChatGPT, Grammarly, and Quillbot. Students reported that AI assistance eased cognitive load, improved grammar, and alleviated writing anxiety. Yet, many expressed mixed feelings about AI's effect on originality and creativity. Although they used AI-generated content cautiously, often rewriting or adapting it, the study underscores both the rise of functional AI literacy and the ongoing tensions between automation and authorship.

1.3 GenAl as a Mediator of Feedback and Assessment

Li et al. [15] investigated the use of ChatGPT among non-native English-speaking medical students in China to enhance academic writing and support grading. Their study involved manual and AI scoring of student "mini papers" before and after ChatGPT-assisted revisions, showing significant improvements in structure, logic, and language. ChatGPT-4's scores aligned closely with human raters, indicating potential for aiding educators in assessment. Students reported high satisfaction with ChatGPT for English polishing, outlining, and formatting.

Similarly, Monika et al. [18] surveyed PhD scholars in India about AI tool usage in academic writing and publishing. Grammarly Go, Zotero, Mendeley, ChatGPT, and Claude AI were widely used for grammar, citation management, and content generation. AI tools aided creativity, research sourcing, and drafting speed, with users selectively employing paraphrasing and proofreading features. Concerns about AI's reliability for generating novel findings were noted. Both studies highlight AI's potential to support feedback and drafting while emphasizing the need for critical oversight.

Wu [28] investigated ChatGPT's impact on feed-back in EAP classrooms. Al tools provided immediate, personalized grammar, vocabulary, and structural suggestions, overcoming delays and generic comments typical in traditional feedback. The author noted that Al promotes learner autonomy by enabling self-correction but emphasized the necessity of critical student evaluation and teacher mediation.

2. Challenges and Contradictions

2.1 Overreliance and Cognitive Diminishment

Zou et al. [31] and Alsaedi [4] highlight that overdependence on GenAl tools can erode learners' higher-order thinking and lead to learning loss. Kubota [14] identifies contradictions in Al use, with students simultaneously viewing ChatGPT as a thinking partner and a threat to original thought. These studies stress the need for clear boundaries and scaffolded usage that prioritizes human reasoning and creativity. The risk of mental passivity, or "outsourcing cognition," may be especially acute in students with underdeveloped metacognitive strategies.

2.2 Risks to Authorial Voice and Critical Engagement Kubota [14] and Barrot [5] argue that reliance on GenAI may compromise authorial voice, emotional nuance, and stylistic individuality. ChatGPT outputs can produce grammatically sound but impersonal texts, which threatens students' identity construction in writing. Ou et al. [19] report that doctoral students developed Critical GAI Literacy by engaging in reflective prompting and evaluating ChatGPT's limitations, particularly regarding language tone and disciplinary fit. Students preferred using GenAI for feedback on their own writing rather than for content generation, emphasizing the importance of maintaining authorial voice and rejecting outputs misaligned with academic norms.

2.3 Equity, Bias, and Data Gaps

Darvin [8] and Acosta-Enriquez et al. [1] emphasize how Al's training data and access disparities reinforce digital inequities. Students from under-resourced backgrounds may lack access to premium tools, leading to differential learning outcomes. A CDL framework has been introduced to help students critically assess platform design, output ideology, and access constraints. Dergaa et al. [9] highlight how data opacity and algorithmic bias in Al outputs can reinforce linguistic marginalization and epistemic injustice in academic contexts.

2.4 Plagiarism, Misinformation, and Detection Challenges

Al-generated content presents unprecedented challenges in maintaining academic integrity. Gao et al. [11] show that ChatGPT abstracts often bypass plagiarism detectors with 100% originality scores, despite containing fabricated data and vague details. Casal et al. [6] demonstrate that even trained reviewers often fail to distinguish between human and Al-generated text, undermining detection efforts. These findings raise concerns about false plagiarism accusations, misinformation, and unreliable screening.

Hryciw et al. [12] state that integration of LLMs in scientific writing poses risks of unintentional plagiarism and misinformation, especially in fields like medicine. Al may inadvertently replicate training data or misrepresent nuanced clinical information, raising ethical concerns and potentially compromising patient care. They emphasize the need for rigorous human oversight, validation, and transparency. Authors remain responsible for verifying Al-generated content, as detection is not automatic, highlighting the limitations of relying solely on Al without active human involvement.

Risks such as unintentional plagiarism [11], [20], [8] and the prevalence of fabricated data or hallucinated citations [8] further complicate academic publishing standards. Acosta-Enriquez et al. [1] underscore the growing need for ethical awareness in the use of Al tools in scholarly work.

2.5 Ethical Tensions, Institutional Ambiguities, and Policy Implications

Wan Azib et al. [24] identify six key limitations of AI writing assistants: lack of academic rigor, limited knowledge base, poor synthesis of complex ideas, weak adaptability to individual style, questionable originality, and plagiarism risks. They stress the need for rigorous human verification and recommend pairing AI use with expert oversight. Zulfa et al. [30] surveyed Indonesian students and found widespread AI use but confusion over ethical boundaries and plagiarism policies. Nearly half admitted to using AI for assignments without clear institutional guidance, raising concerns about misuse. They call for clear policies, AI ethics education, and open faculty-student dialogue.

Hysaj et al. [13] report that many ESL students use Al tools to overcome language barriers but feel guilt or fear due to insufficient institutional support. Cultural differences affect plagiarism perceptions, with collectivist values sometimes conflicting with Western academic integrity norms. This gap between policy and practice causes stress and inconsistent enforcement. Aljuaid [3] reviews Al's role in higher education writing instruction, concluding that Al improves efficiency and feedback but cannot replace human creativity, judgment, or ethics. The author highlights risks of superficial learning, privacy issues, and algorithmic bias, urging transparent governance and educator involvement.

- 3. Pedagogical Models, Conceptual Frameworks, and Integration Strategies
- 3.1 Developing Critical Generative Al Literacy for Empowered Student Agency

Wang et al. [26] advocate the APSE model–Awareness, Positionality, Strategy, Evaluation–to cultivate Critical AI Literacy (CAIL). Separately, Wang [25] explores student reflections and AI interaction logs, revealing how GenAI reshapes writing behaviors, strategies, and perceptions of authorship. Ou et al. [19] extend this approach by proposing a framework for Critical Generative AI Literacy (GAIL), especially in doctoral academic writing. Their model integrates epistemic responsibility and reflexivity to ensure that ChatGPT use supports rather than substitutes scholarly development. Ou et al. [19] also recommend structured journaling and prompt design assignments to support students' ethical and strategic engagement with GenAI tools.

Aljuaid [3] emphasizes that effective GenAl integration in academic writing requires more than technical proficiency – it demands critical evaluation of Al outputs for accuracy, relevance, bias, and ethical use. Cultivating such discernment fosters epistemic

awareness and helps students move beyond passive reliance toward active, responsible revision. Zhang et al. [29] embed GenAl literacy within genre-based instruction, enabling students to recognize Al's rhetorical limitations and treat outputs as provisional drafts. This promotes reflective practice and supports retention of authorial voice and originality.

Monika et al. [18] found that PhD researchers selectively employ AI tools for paraphrasing and citation management while exercising critical oversight. Their strategic usage exemplifies advanced literacy that balances efficiency with scholarly integrity. Similarly, Tokdemir Demirel [23] observed that students often revise or rephrase AI-generated content to preserve originality, reflecting a cautious but growing literacy. Together, these studies show that fostering critical GenAI literacy requires scaffolded instruction, ethics education, and pedagogical modeling to transform AI tools into instruments of empowerment, not shortcuts.

3.2 Acceptance, Motivation, and Behavioral Models Acosta-Enriquez et al. [1] develop the Unified Theory of Acceptance toward ChatGPT (UTAC), which combines affective, cognitive, and behavioral predictors. Their quantitative study shows that ease of use, perceived importance, and emotional engagement significantly predict responsible usage. This complements findings by Su et al. [22], who examine the use of ChatGPT in argumentative writing classrooms, where it supports students in outlining, revising, and proofreading their work. Framed as a "collaboration," ChatGPT functions as a "virtual peer" and "writing evaluator." The authors emphasize the need for training in both effective and ethical use, urging teachers to guide students in critically evaluating AI-generated content and navigating ethical concerns.

3.3 Pedagogical Scaffolding and Task Design for Responsible AI Integration

Barrot [5] proposes a pedagogically staged approach to incorporating ChatGPT across the writing process, emphasizing the need to preserve students' critical thinking and authorial development. In his model, AI is used selectively: during pre-writing for brainstorming and topic refinement, and in the post-writing phase for editing grammar and style. Crucially, he cautions against AI use during the initial drafting stage, arguing that students must first construct their ideas independently to develop original voice and rhetorical competence.

Complementing this perspective, Alharbi [2] advocates for a hybrid instructional model that blends Al support with teacher feedback and peer collaboration. He contends that while Al tools are helpful for surface-level corrections, deeper writing issues, such as organization, coherence, and argumentation, require human guidance. The author emphasizes that educators must provide explicit instruction on the capabilities and limitations of Al tools, fostering what he terms

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"calibrated trust." Importantly, he calls for differentiated implementation based on students' proficiency levels and contextual learning goals, situating AI use within an "ecology of implementation" that considers pedagogical, institutional, and ethical factors.

Wu [28] emphasizes that effective GenAl integration depends on pedagogical mediation, highlighting the need for explicit instruction on prompt formulation, tool limitations, and ethical use. In EAP classrooms, teacher-led modeling of Al-supported revision processes enabled students to move beyond surface-level edits and develop structurally coherent drafts.

Maphoto et al. [17] report that both students and lecturers at a South African open university initially approached ChatGPT with skepticism, but gradually recognized its value in addressing grammar and organization. Lecturers stressed that GenAl should complement—not replace—traditional writing instruction, while informal feedback from graders acknowledged both risks and motivational benefits. Hysaj et al. [13] argue that integrating Al paraphrasing tools into writing curricula supports multilingual learners by scaffolding complex tasks, enhancing paraphrasing ability, and reducing plagiarism risk. They recommend curriculum designs that include task decomposition, reflection, and metacognitive engagement with GenAl, enabling equitable access to writing development.

4. Ethical and Institutional Responses

In response to these growing concerns, educational institutions are beginning to develop frameworks to guide ethical AI use. Alharbi [2] proposes an ecological approach that blends AI assistance with human guidance and peer interaction, stressing the importance of context-sensitive applications. Praphan et al. [20] emphasize the need to embed AI literacy and ethics into curricula to ensure responsible student engagement. Acosta-Enriquez et al. [1] argue for institutional training programs that address plagiarism and misinformation risks.

Dergaa et al. [9] call for clear guidelines, emphasizing that AI cannot be listed as an author, and stressing the need for human oversight, urging institutions to adopt detection tools, set rules for use, include AI ethics in education and encouraging publishers to prohibit AI-generated content and ensure accountability. Ultimately, the authors state that responsible use demands critical thinking, transparency, and shared responsibility across academia. Additionally, Hryciw et al. [12] advocate for standardized classification and reporting protocols to promote transparency and accountability in Al-assisted academic work. Casal et al. [6] show that Al-generated abstracts are nearly indistinguishable from human ones, prompting discussions about instructional strategies to teach critical discernment.

Zhang et al. [29] report that postgraduate science and technology students benefited from a redesigned academic writing course that combined

genre-based instruction, collaborative learning, and guided ChatGPT use. Their action research shows that Al-supported tasks, when anchored in explicit genre pedagogy, helped students internalize disciplinary norms and improve text organization and clarity. Learners valued ChatGPT's role in ideation and linguistic refinement, though they emphasized the need for vigilant oversight to avoid plagiarism and surface-level paraphrasing. The reform yielded increased student engagement and satisfaction, suggesting that Al tools are most effective when situated within structured, reflective learning environments.

Conclusions and Prospects for Further Research. This review highlights the multifaceted transformation of academic writing practices driven by generative AI tool, particularly in higher education settings involving EFL and multilingual learners. These tools support multiple stages of writing from brainstorming and drafting to feedback and revision, but their educational value is contingent on how they are embedded within pedagogical designs, ethical frameworks, and learners' evolving AI literacy.

Successful integration depends on a triad of interconnected factors: (1) deliberate instructional mediation that aligns GenAI use with course objectives and meaningful writing tasks; (2) transparent ethical guidelines that promote responsible use without compromising academic integrity; and (3) the development of critical AI literacy, enabling students to collaborate with AI as reflective writers rather than passive users.

The reviewed studies demonstrate GenAl's potential to enhance personalization, efficiency, and learner autonomy in L2 writing instruction. Yet, they also expose pedagogical, ethical, and institutional tensions that demand nuanced responses, beyond binary debates of banning or embracing Al. Moving forward, educators and researchers must prioritize frameworks that foreground critical engagement, transparency, and equitable access.

Future research should examine the long-term impact of Al-supported writing on learner agency, rhetorical sophistication, and disciplinary identity across diverse genres and proficiency levels. Longitudinal studies are needed to assess how Al-augmented writing practices transfer to independent performance and academic authenticity. Equally important are investigations into how institutional policies, teacher beliefs, and cultural contexts mediate students' Al engagement.

Comparative studies of GenAI tools, alongside collaborations between educators and developers, are crucial for designing inclusive, pedagogically grounded applications. The dynamic interplay between teacher mediation and AI affordances, especially in multilingual classrooms where genre knowledge and scaffolding are critical, remains an underexplored but essential area of inquiry.

As generative AI continues to evolve, the central challenge is not merely adapting to rapid technological change but shaping its use in ways that support meaningful, ethical, and inclusive academic writing development for all learners.

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