Scaffolding Academic Writing Using AI Assistance: A Systematic Literature Review

Noor Hanim Rahmat[1*], Zulaikha Khairuddin[2], Norhartini Aripin[3], Muhammad Irfan Mokhtar[4]

[1,2,3]Akademi Pengajian Bahasa, Universiti Teknologi MARA, Shah Alam, Malaysia

[4]Akademi Pengajian Bahasa, Universiti Teknologi MARA, Johor Branch, Pasir Gudang Campus

[*]Corresponding Author

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ABSTRACT

In spite of the fast expansion of studies in this area, knowledge about how AI serves as an efficient scaffold for academic writing is fragmented and not systematically synthesised. To fill the gap, this paper provides an extensive systematic literature review analysing the role of AI assistance as a method to scaffold academic writing. The review of the articles was performed following the PRISMA guidelines for methodological transparency and consistency. Next, a series of advanced search strategies structured around 3 thematic keyword clusters was used to systematically search two major academic databases (Web of Science and Scopus) for studies published between 2020 and 2026. The themes found were: (1) learner engagement, agency, and affective responses in AI-assisted academic writing; (2) perceptions, acceptance, and ethics of AI-technologies in academic writing; and (3) pedagogic practices, instructional design & automated feedback in AI-supported writing. After identification, screening, eligibility, and quality assessment, 23 original studies remained for analysis. The reviewed evidence suggests that AI-assisted scaffolding could potentially contribute to academic writing development through fostering motivation, agency, and reducing affective barriers (e.g., writing-anxiety), provided that AI tools are integrated into well-designed instructional frameworks. In addition, the included studies stress a relatively positive outlook on AI technologies by learners and educators with ongoing ethical concerns of IDA tied to academic integrity, dependence, and authenticity. In addition, pedagogically informed teaching-learning environments and mindful application of automated feedback are found to be key elements in enhancing AI-supported writing. Overall, this review suggests that AI can have its greatest impact as a support structure for scaffolding rather than a substitute for instructional guidance, with implications applicable to both practice and policy in the implementation of AI in academic writing instruction going forward.

Keywords: Artificial intelligence in academic writing**,** Scaffolding learning**,** AI-assisted writing**,** Automated feedback**,** Systematic literature review

INTRODUCTION

AI-mediated Scaffolding of Academic Writing is a disruptive method of augmenting students' writing skills through the provision of structured support and personalized feedback. This approach invokes the potential of artificial intelligence to address common obstacles in academic writing, including brainstorming ideas, framing arguments, and refining wording. AI- based tools in academic writing courses have demonstrated potential in enhancing students' levels of capability, motivation, and self-assurance.

A significant advantage of using AI-supported scaffolding is that it can offer personalised and adaptive support. AI devices can provide immediate responses about writing mechanics, identity or coherence, and argumentation. For example, the Artificial Intelligence-Supported Scaffolding (AISS) system offers examples of what human experts are likely to write and supports students in developing more robust claims and cohesive texts (Kim et al., 2022; Kim & Kim, 2022). Similarly Some tools, such as Grammarly, provide instant and personalized feedback that can help improve students' motivation and writing performance (Lo, 2025).. These

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AI systems can customize the learning materials for each student based on their specific needs, which is often beyond human instructors' capability due to time limit and diverse demands of students (Kim et al., 2022; Kim & Kim, 2022).

Moreover, AI-assisted scaffolding can significantly enhance the learning experience by integrating traditional writing frameworks with AI interventions. Studies have shown that students who engage with AI tools at later stages of the writing process, such as after drafting, exhibit greater improvements in motivation, self-efficacy, and performance (Li & Tekwa, 2025). This approach helps students develop their ideas independently before seeking AI support, fostering a balance between human creativity and AI assistance. Additionally, AI tools can reduce the workload for instructors by automating routine tasks such as grammar and style checking, allowing them to focus on more complex aspects of writing instruction (Khan, 2025; Qureshi et al., 2025).

Although the use of AI in academic writing has advantages and benefits, it also involves issues related to abuse and its possible negative impact on critical thinking skills. There is a potential danger that students may become overly reliant on AI tools, potentially resulting in reduced cognitive engagement and creativity (Holmner et al., 2025). In order to address these pitfalls, AI must be employed as a supplement to traditional writing instruction rather than its substitute. Teachers must stress the need for students to learn and achieve independence in writing skills, as well as in critical thinking skills, by augmenting rather than replacing existing teachers through AI tools (Holmner et al., 2025; Li & Tekwa, 2025). In addition, ethical issues such as academic integrity and anti-plagiarism need to be tackled for reasonable application of AI in academics environment (Holmner et al., 2025; Khan, 2025)

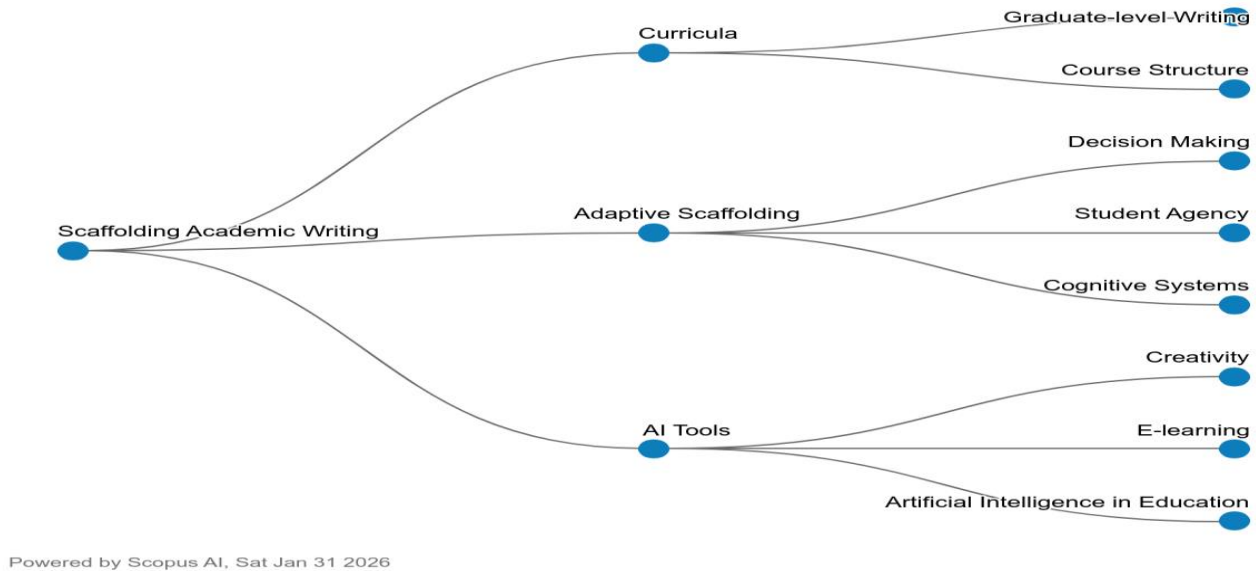

Figure 1- Concept map showing the relationships among curricula, adaptive scaffolding, and AI tools in supporting academic writing development.

Figure 1 depicts a concept map schematizing how we frame the introduction around Scaffolding Academic Writing (SAW) as a central theme and how it is operationalized through interconnected curricular, adaptive scaffold, and AI tools. Values such as course structures and the use of graduate writing expectations are related to academic writing development in curricula, while decision making, student agency, cognitive systems and creativity function as dynamic aspects of learning in adaptive scaffolding. AI applications take this framework one step further by integrating e-learning environments into the larger uses of AI across education, emphasizing their role in drafting support and personalized instruction. Collectively, the map presented paints a coherent picture, where structured curricula, learner-centred scaffolding and smart technologies interplay in supporting academic writing development at Higher Education.

To sum up, AI-assisted academic writing scaffolding is a powerful tool to assist students in improving their writing ability. These tools can support students in improving their writing proficiency, engagement, and confidence by providing real-time adaptive personalized feedback, and integrating AI interventions in their

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traditional writing processes. But there's a balance to be struck between the advantages of AI and the importance of nurturing independent thought, as well as concerns such as ethics. As AI technology develops further, academic writing support provided by it will probably increase as well, creating new ways to improve the quality of education without sacrificing originality and creativity in student work.

Research Question

Research questions are the cornerstone of an SLR as they set the conceptual basis and precise goal for the complete review process. They also determine the trajectory of the SLR, or which studies are included and excluded, and maintain the alignment of the review with its topic. Well-defined research questions are conducive to a comprehensive search strategy that allows for a systematic identification of all relevant studies related to central aspects of the research domain, minimizing bias risk and offering an opportunity for in-depth evidence synthesis. In addition, the formulated research questions provide a structured framework for capturing and coding data of selection studies, allowing a meaningful analysis and synthesis of findings to take place. Correctly framed research questions provide a clear focus, reduce ambiguity, and increase relevance and practical application of review results. Keeping and other working group members' 35 'It's good to have a question on each level. They are also transparency-enhancing and reproducibility-enhancing tools for the SLR, enabling others to replicate the methodological process or further explore other contexts or related areas. Finally, research questions support orienting the review process towards its purposes as exploring research gaps, establishing trends, or an assessment of practises in a specific subject area.

The formulation of research questions is therefore a critical activity during the planning stage and represents one of the most essential components of an SLR, as it shapes the entire review methodology (Kitchenham & Charters, 2007). Given that the purpose of this SLR is to examine and synthesize the current state of the art in the field, a structured approach to question development is required. To this end, the PICo framework, a mnemonic approach commonly applied in qualitative evidence synthesis, was adopted in this study (Lockwood et al., 2015). PICo refers to Population, Interest, and Context, providing a systematic structure for developing focused and analytically robust research questions that are well-suited to the aims of this review.

Research Question 1:

How does AI-assisted scaffolding influence learner engagement, agency, and affective responses among students in academic writing contexts within higher education?

Research Question 2:

What perceptions, levels of acceptance, and ethical concerns are reported by students and educators regarding the use of AI technologies for scaffolding academic writing in higher education?

Research Question 3:

What pedagogical practices, instructional design approaches, and automated feedback strategies are employed to scaffold academic writing through AI-assisted tools in higher education settings?

MATERIAL AND METHODS

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework is an internationally recognized standard for conducting systematic literature reviews, ensuring methodological transparency, completeness, and consistency across all stages of the review process (Kitchenham & Charters, 2007; Page et al., 2021) Adherence to PRISMA guidelines enhances analytical rigor by providing explicit procedures for the systematic identification, screening, and inclusion of relevant studies. The framework also emphasizes the value of randomized studies due to their capacity to minimize bias and generate robust empirical evidence. In this review, Web of Science and Scopus were selected as primary data sources because of their comprehensive coverage, indexing quality, and reliability.

The PRISMA methodology comprises four sequential stages: identification, screening, eligibility, and data abstraction. During the identification stage, systematic searches are conducted to capture all potentially relevant

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records. The screening stage applies predefined inclusion and exclusion criteria to remove irrelevant or methodologically weak studies. Subsequently, the eligibility stage involves an in-depth evaluation of the remaining studies to confirm their suitability for inclusion. Finally, data abstraction entails the extraction and synthesis of key information from the selected studies, enabling the generation of reliable and meaningful conclusions. This structured and transparent approach strengthens the validity of the review and ensures that its findings provide a credible foundation for future research and scholarly inquiry.

Identification

Using a PRISMA-informed systematic review strategy, this study conducted a comprehensive search of two leading bibliographic databases, Scopus and Web of Science, to identify high-quality scholarly literature on *scaffolding academic writing supported by AI assistance*. The search yielded 401 records from Scopus and 242 records from Web of Science, resulting in a combined total of 643 publications. The relatively higher yield from Scopus can be attributed to its broader journal coverage, particularly in interdisciplinary domains such as educational technology, artificial intelligence, and applied linguistics, as shown in Table 1. In contrast, Web of Science offers more selective indexing, prioritizing high-impact and well-established journals, which enhances the methodological robustness of the retrieved literature. The use of both databases ensured comprehensive coverage while minimizing the risk of publication bias and database-specific limitations.

TABLE 1 The search string.

Database	Search Strategy / Query	Filters Applied	Date of Access
Scopus	TITLE-ABS-KEY (("academic writing" OR "scholarly writing" OR "research writing" OR "dissertation writing" OR "thesis writing") AND ("AI assistance" OR "artificial intelligence" OR "machine learning" OR "automated writing" OR "writing support") AND ("higher education" OR "tertiary education" OR "post-secondary education" OR "university" OR "college"))	Limited to Article (DOCTYPE = "ar"); Language = English	Jan 2026
Web of Science (WoS)	("academic writing" OR "scholarly writing" OR "research writing" OR "dissertation writing" OR "thesis writing") AND ("AI assistance" OR "artificial intelligence" OR "machine learning" OR "automated writing" OR "writing support") AND ("higher education" OR "tertiary education" OR "post-secondary education" OR "university" OR "college")	Topic search; Document Type = Article; Language = English	Jan 2026

Screening

Following the identification stage, a structured screening process was applied to refine the initial set of 643 records retrieved from Scopus (n = 401) and Web of Science (n = 242). First, duplicate records across the two databases were identified and removed (n = 91) to prevent redundancy and ensure the integrity of the dataset. The remaining records then underwent title and abstract screening based on predefined inclusion and exclusion criteria (refer to Table 2). As a result of this process, 273 records from Scopus and 195 from Web of Science were retained, yielding a total of 468 studies that met the basic relevance and quality thresholds for further consideration.

During screening, 175 records were excluded for failing to meet the study's eligibility criteria. Specifically, non-English publications were removed to maintain consistency and analytical rigor, while conference proceedings,

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books, review articles, and in-press publications were excluded due to their limited empirical depth or incomplete methodological reporting. These exclusion criteria were deliberately applied to ensure that the remaining studies represented peer-reviewed, full-length journal articles with sufficient methodological transparency and scholarly contribution. Overall, the screening process significantly reduced the dataset while enhancing its relevance and quality, thereby establishing a robust foundation for the subsequent eligibility assessment and data extraction phases of the systematic review.

TABLE 2 The selection criterion is searching

Criterion	Inclusion	Exclusion
Language	English	Non-English
Time Line	2020-2026	< 2020
Subject	Arts and Humanities	Besides Arts and Humanities
Literature type	Journal (Article)	Conference, Book, Review
Publication Stage	Final	In Press

Eligibility

In the third stage of the review process, the eligibility phase (refer to Figure 2), 377 articles were subjected to full assessment. At this stage, article titles, abstracts, and key content were examined in detail to determine compliance with the predefined inclusion criteria and alignment with the study's research objectives. Following this evaluation, 354 articles were excluded for failing to meet eligibility requirements, including being outside the scope of the study, having non-informative or irrelevant titles, presenting abstracts misaligned with the research objectives, lacking full-text availability, or not being grounded in empirical evidence. Consequently, 23 articles satisfied all eligibility criteria and were retained for inclusion in the final review.

Data Abstraction and Analysis

As a central analytical approach, integrative analysis was used in this study to comprehensively review and synthesise evidence from multiple qualitative research designs. The aim of this approach was to uncover topics and subtopics regarding the research interest. In theme development, the initial onset was aimed at collecting data until theoretical saturation of this sample had been reached. 23 publications were selected at the final stage. The articles were selected based on their findings and conceptual materials that are related to the research questions. As shown in Figure 2, each paper was carefully studied to identify evidence of scaffolding academic writing that is aided by AI.

The methods and main results of the included papers were afterwards critically analysed in terms of contribution to the area. There were altogether three coders; two were experts in academic writing, and one was an expert in education technology. Each expert independently assesses the study according to these criteria, and the scores are then totalled across all experts to determine the overall mark.

There was a collective theme development to ascertain that interpretations were grounded in contextual evidence and consistent with the study's analytical framework. An audit trail was kept at all stages of the analysis to record new ideas, analytical decisions taken, uncertainties, and interpretive reflections. Debatable themes Emerging themes were compared in a systematic fashion by the authors for inconsistencies and theme overlaps. All conceptual divergences were clarified through iterative discussion and consensus, thereby enhancing the credibility and trustworthiness of the analytical process.

Quality of Appraisal

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Based on the guidelines of Kitchenham & Charters (2007), after identifying primary studies, the appropriate methodological quality is systematically judged when conducting comparisons between them. Primary studies: Articles, papers, or documents that formed part of the SR as a direct result of the initial screening process. These studies are considered as the primary sources of empirical evidence, and are evaluated for high methodological quality and quantitatively or qualitatively compared in order to answer review research questions. A structured QA framework adapted from (Abouzahra et al., 2020) was used in the current work, which involves six quality assessment (QA) criteria. Each requirement was scored on a three-point scale: Yes (Y), which received a score of 1 when the requirements were fully met, Partly (P), which was assigned a score of 0.5 if the criterion had been partially met with some limitations, and No (N), which was given a score of 0 if the requirement was not satisfied. This objective scoring system helped to achieve a clear, standardised, and quantitative control for methodological quality in the included studies.

• QA1. Is the purpose of the study clearly stated?

• QA2. Is the interest and the usefulness of the work clearly presented?

• QA3. Is the study methodology clearly established?

• QA4. Are the concepts of the approach clearly defined?

• QA5. Is the work compared and measured with other similar work?

• QA6. Are the limitations of the work clearly mentioned?

The table outlines a quality assessment (QA) process used to evaluate a study based on specific criteria. Three experts assess the study using the criteria listed, and each criterion is scored as "Yes" (Y), "Partly" (P), or "No" (N). Here's a detailed explanation:

Is the purpose of the study clearly stated?

- This criterion checks whether the study's objectives are clearly defined and articulated. A clear purpose helps set the direction and scope of the research.

Is the interest and usefulness of the work clearly presented?

- This criterion evaluates whether the study's significance and potential contributions are well-explained. It measures the relevance and impact of the research.

Is the study methodology clearly established?

- This assesses whether the research methodology is well-defined and appropriate for achieving the study's objectives. Clarity in methodology is crucial for the study's validity and reproducibility.

Are the concepts of the approach clearly defined?

- This criterion looks at whether the theoretical framework and key concepts are clearly articulated. Clear definitions are essential for understanding the study's approach.

Is the work compared and measured with other similar work?

- This evaluates whether the study has been benchmarked against existing research. Comparing with other studies helps position the work within the broader academic context and highlights its contributions.

Are the limitations of the work clearly mentioned?

- The scores are then totalled across all experts to determine the overall mark. For a study to be accepted for the next process, the total mark, derived from summing the scores from all three experts, must exceed 3.0 (Carrera-Rivera et al., 2022). This threshold ensures that only studies meeting a certain quality standard proceed further.

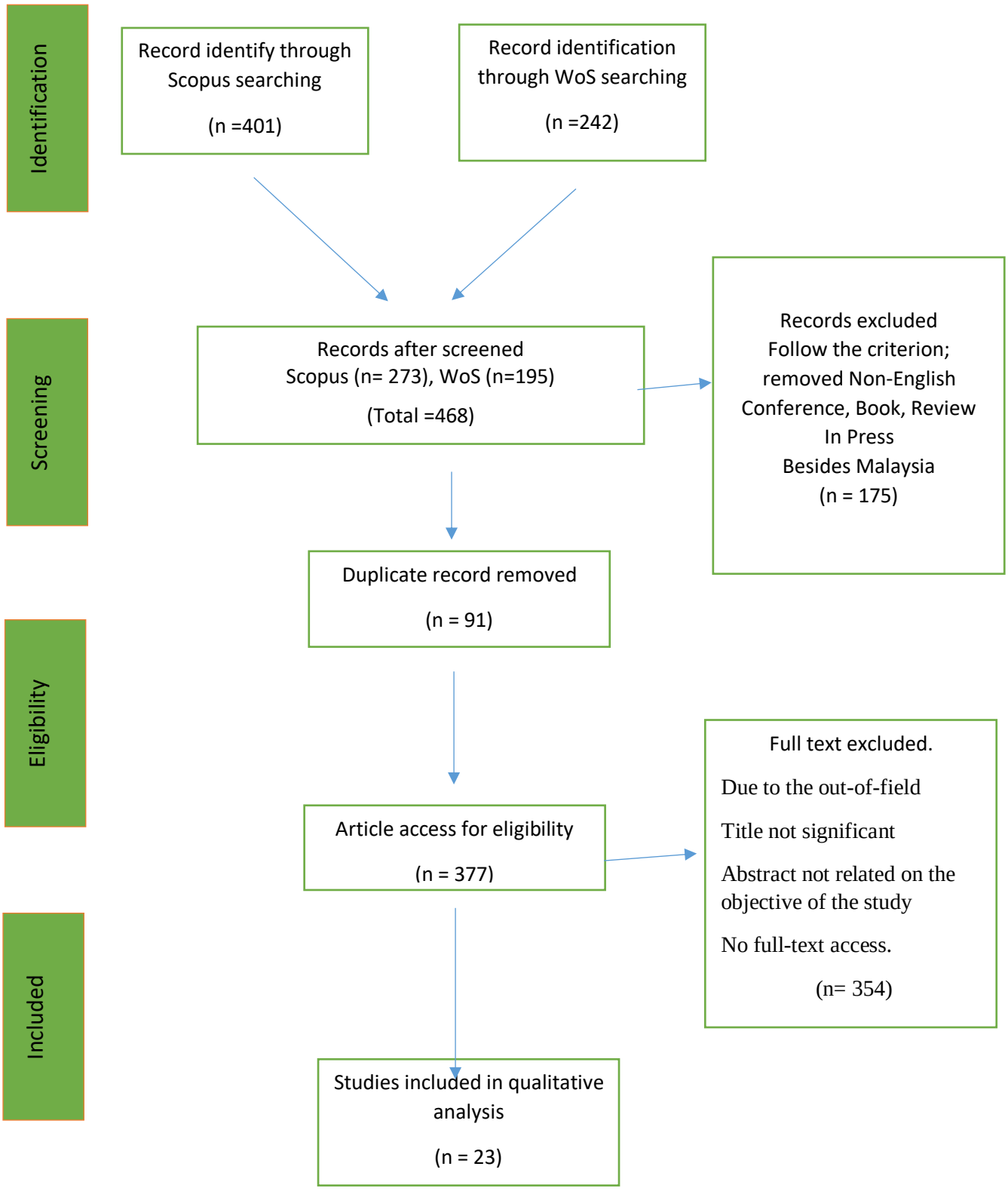

FIGURE 2. Flow diagram of the proposed searching study (Moher D, Liberati A, Tetzlaff J, 2009)

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RESULT AND DISCUSSION

Quality Assessment

Based on quality assessment, Table 3 shows the result of assessment performance for selected primary studies.Overall, the majority of studies demonstrate **clear research purposes (QA1)**, **strong relevance and usefulness (QA2)**, and **well-defined conceptual frameworks (QA4)**, reflecting the maturity of research on AI-assisted academic writing. Methodological clarity (QA3) is generally adequate, though some qualitative and exploratory studies provide limited procedural detail at the abstract level. Comparisons with prior work (QA5) and explicit discussion of limitations (QA6) are less consistently reported in abstracts, which is typical but justifies further full-text scrutiny during data abstraction. Studies scoring above **80%** were prioritized as high-quality contributions informing the synthesis.

Table 3-QUALITY ASSESSMENT TABLE

AUTHOR	TITLE	YEAR	PS	QA1	QA2	QA3	QA4	QA5	QA6	Total Mark	Percentage (%)
(Barrot & Zhang, 2026)	Learning Styles, Engagement and Anxiety in AI-Mediated Writing: A Multimodal Feedback Study	2026	PS1	Y	Y	Y	Y	P	N	4.5	75.0
(Tekir, 2026)	Generative AI use in EFL writing: associations with originality, critical reasoning, and metacognitive engagement in a Turkish higher education context	2026	PS2	Y	Y	Y	Y	P	P	5.0	83.3
(Moorhouse et al., 2025)	Generative AI tools and empowerment in L2 academic writing	2025	PS3	Y	Y	Y	Y	N	P	4.5	75.0
(Milad & Fayez, 2025)	Perception and Attitudes towards Augmented Reality (AR) Enhanced Academic Writing: Satisfaction Levels	2025	PS4	Y	Y	P	Y	N	N	4.0	66.7
(Peña-Cáceres et al., 2025)	LINGUISTIC And Visual Patterns Of Chatgpt In Higher Education An Analysis Of Its Use In Undergraduate And Postgraduate Theses;	2025	PS5	Y	Y	P	Y	Y	N	4.5	75.0

(Farneste & Bicjutko, 2025)	Artificial Intelligence Integration In Acquisition Of English Academic Writing: A Comparative Analysis Of Student Perspectives In School And University Settings	2025	PS6	Y	Y	P	Y	N	N	4.0	66.7
(Anthony et al., 2025)	Is ChatGPT the Future of Academic Writing? A Sequential Explanatory Study to Explore Generative Conversational AI as an Academic Writing Support Tool for Research Scholars	2025	PS7	Y	Y	Y	Y	P	P	5.0	83.3
(Akhmedjanova et al., 2025)	Teaching Research Writing with AI: A Case Study of Academic Development Courses in Higher Education	2025	PS8	Y	Y	Y	Y	N	P	4.5	75.0
(Smirnova, 2025)	Developing students' agency and voice by using generative AI in an online EAP module	2025	PS9	Y	Y	Y	Y	N	N	4.0	66.7
(Du et al., 2025)	Students' Perceptions of Artificial Intelligence in Academic Writing: A Case at A University in Vietnam	2025	PS10	Y	Y	Y	Y	P	P	5.0	83.3
(Apriani et al., 2025)	A Mixed-Method Study on the Effectiveness of Using ChatGPT in Academic Writing and Students' Perceived Experiences	2025	PS11	Y	Y	Y	Y	N	P	4.5	75.0

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(Pakdel et al., 2025)	Navigating AI writing tools in medical education: A SWOT analysis of L2 academic writing perspectives	2025	PS12	Y	Y	Y	Y	Y	P	5.5	91.7
(Roothooft et al., 2025)	English Writing Competence And Emi Performance: Student And Expert Perceptions Of Academic Writing In Emi	2025	PS13	Y	Y	Y	Y	P	N	4.5	75.0
(Rafida et al., 2024)	Efl Students' Perception In Indonesia And Taiwan On Using Artificial Intelligence To Enhance Writing Skills	2024	PS14	Y	Y	P	Y	N	P	4.5	75.0
(Suryanto et al., 2024)	Scrutinizing The Impacts Of Grammarly Application On Students' Writing Performance And Perception	2024	PS15	Y	Y	Y	Y	P	N	4.5	75.0
(Ou et al., 2024)	Academic communication with AI-powered language tools in higher education: From a post-humanist perspective	2024	PS16	Y	Y	Y	Y	N	P	4.5	75.0
(Matikainen, 2024)	Academic writing in English: Lessons from an EMI-program in Japan	2024	PS17	Y	Y	P	Y	N	N	4.0	66.7
(Krajka & Olszak, 2024)	Artificial Intelligence Tools In Academic Writing Instruction: Exploring The Potential Of On-Demand Ai Assistance In The Writing Process;	2024	PS18	Y	Y	Y	Y	P	N	4.5	75.0
(Werdiningsih &	Balancing AI and authenticity: EFL students'	2024	PS19	Y	Y	Y	Y	N	Y	5.0	83.3

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Rusdin, 2024)	experiences with ChatGPT in academic writing										
(Dizon & Gold, 2023)	Exploring the effects of Grammarly on EFL students' foreign language anxiety and learner autonomy	2023	PS20	Y	Y	Y	Y	P	P	5.0	83.3
(Ginting & Fithriani, 2022)	Peer And Automated Writing Evaluation (Awe): Indonesian Efl College Students' Preference For Essay Evaluation	2022	PS21	Y	Y	P	Y	P	N	4.5	75.0
(Tambunan et al., 2022)	Investigating EFL students' linguistic problems using Grammarly as automated writing evaluation feedback	2022	PS22	Y	Y	P	Y	N	N	4.0	66.7
(Huang & Renandya, 2020)	Exploring the integration of automated feedback among lower-proficiency EFL learners	2020	PS23	Y	Y	Y	Y	P	P	5.0	83.3

The quality assessment results (refer to Table 3) for the 23 selected studies (PS1–PS23) indicate that all articles met the minimum quality threshold, with percentage scores ranging from **66.7% to 91.7%,** and therefore, **no study was rejected** based on the predefined criterion that articles scoring below 50% would be excluded. Overall, the studies demonstrated strong performance in clearly stating research purposes (QA1), establishing the relevance and usefulness of the work (QA2), and defining key concepts and frameworks (QA4), reflecting a coherent and well-articulated body of research on AI-assisted academic writing. Methodological clarity (QA3) was generally satisfactory, though some studies, particularly exploratory or qualitative investigations, provided limited methodological detail at the abstract level. Comparisons with related work (QA5) and explicit reporting of study limitations (QA6) were less consistently addressed, which is common in abstract-only evaluations and warrants closer examination during full-text analysis. Notably, PS12 achieved the highest quality score (91.7%), reflecting comprehensive coverage across most criteria. Collectively, these results confirm that the included studies possess sufficient methodological and conceptual rigor to support reliable synthesis and thematic analysis in the subsequent stages of the systematic review.

Themes

Theme 1: Learner Engagement, Agency, and Affective Responses in AI-Assisted Academic Writing

This theme (Table 4) encompasses studies examining how AI-supported writing influences learners' engagement, agency, empowerment, anxiety, autonomy, identity, and cognitive–affective experiences in academic writing contexts.

Table 4- Theme 1

PS	Article Title
1	Learning Styles, Engagement and Anxiety in AI-Mediated Writing: A Multimodal Feedback Study
2	Generative AI use in EFL writing: associations with originality, critical reasoning, and metacognitive engagement
3	Generative AI tools and empowerment in L2 academic writing
9	Developing students' agency and voice by using generative AI in an online EAP module
16	Academic communication with AI-powered language tools in higher education: From a post-humanist perspective
19	Balancing AI and authenticity: EFL students' experiences with ChatGPT in academic writing
20	Exploring the effects of Grammarly on EFL students' foreign language anxiety and learner autonomy

The reviewed literature consistently indicates that AI-assisted scaffolding in academic writing reshapes learners' engagement, cognitive processing, and affective experiences by mediating how feedback and support are delivered during writing tasks. Empirical evidence highlights that the effectiveness of AI support is strongly dependent on feedback modality and its alignment with learners' cognitive and perceptual characteristics. Multimodal feedback systems, particularly linguistic and interactive feedback, demonstrate stronger associations with writing performance than purely text-based feedback, suggesting that layered scaffolding supports deeper processing and task engagement (Barrot & Zhang, 2026). Illustratively, manifested by apparent coping approaches at different levels from recent decades of linguistic to development planning AI tools can relieve planning and idea level burden ubtle originality and critical thinking which are key in knowing how scaffolding should be sufficiently guided transitions (Tekir, 2026). Engagement consistently surfaces as a mediating factor that connects AI feedback and performance, whereas writing anxiety moderates these relationships by amplifying or limiting learners' responses to the support. Scaffolded scaffolding seems to reduce anxiety and produce sustained participation, while unsupervised AI use may accentuate uncertainty and reliance. Overall, these findings indicate that AI works best as a scaffold when supported by pedagogically sequenced feedback, rather than being presented as an independent writing solution.

Across studies, learner agency and voice are central constructs in understanding how AI-mediated scaffolding influences academic writing development. Qualitative investigations report that generative AI tools are frequently perceived as empowering, particularly among second-language writers transitioning into academic discourse communities, due to enhanced confidence, efficiency, and perceived competence (Moorhouse et al., 2025). However, this sense of empowerment is not unproblematic, as limited awareness of how AI systems generate content may lead to surface-level agency that masks reduced authorial control. Classroom-based interventions demonstrate that explicit scaffolding frameworks, including staged AI use and policy-guided boundaries, foster more meaningful engagement with academic genres and support the development of an authentic academic voice (Smirnova, 2025). Similar patterns appear in studies adopting post-humanist perspectives, which conceptualize academic writing as a distributed practice involving human and non-human actors, where AI tools extend linguistic repertoires while reshaping writer identity and responsibility (Ou et al., 2024). At the same time, ethical concerns related to authenticity, accountability, and transparency recur across contexts, with learners expressing the need for clear instructional guidance to balance AI assistance with independent judgment (Werdiningsih & Rusdin, 2024). These converging findings indicate that scaffolding academic writing with AI requires not only technical support but also epistemic and ethical framing to sustain agency and academic integrity.

Pedagogical implications across the reviewed studies emphasize that AI-assisted scaffolding is most effective when integrated into instructional design through explicit guidance, feedback regulation, and reflective practice. Action research and mixed-method studies demonstrate that scaffolded AI use enhances genre awareness, task comprehension, and learner autonomy, particularly when introduced early in the writing process and aligned with instructional objectives (Apriani et al., 2025; Smirnova, 2025). Automated writing evaluation tools such as Grammarly are shown to reduce language anxiety and support self-regulation, reinforcing the role of affect-sensitive scaffolding in academic writing instruction (Dizon & Gold, 2023). However, findings also caution that AI tools may encourage cognitive offloading or overreliance if pedagogical structures are absent, underscoring

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the importance of instructional mediation (Tekir, 2026). Collectively, the literature positions AI not as a replacement for academic writing instruction but as a scaffold that amplifies learning when embedded within coherent pedagogical frameworks. The evidence supports a shift toward adaptive, transparent, and learner-centered AI integration that balances efficiency with cognitive engagement and ethical accountability.

Theme 2: Perceptions, Acceptance, and Ethical Considerations of AI Technologies in Academic Writing

This theme (Table 5) captures research centred on students' and educators' perceptions, attitudes, acceptance, satisfaction, and ethical concerns regarding the integration of AI, AR, and generative tools in academic writing across educational settings.

Table 5- Theme 2

PS	Article Title
4	Perception and Attitudes towards Augmented Reality (AR) Enhanced Academic Writing
6	Artificial Intelligence Integration in Acquisition of English Academic Writing
7	Is ChatGPT the Future of Academic Writing?
10	Students' Perceptions of Artificial Intelligence in Academic Writing
12	Navigating AI Writing Tools in Medical Education: A SWOT Analysis
14	EFL Students' Perception in Indonesia and Taiwan on Using AI
17	Academic Writing in English: Lessons from an EMI-Program in Japan

The reviewed studies collectively indicate that AI-assisted scaffolding in academic writing is increasingly perceived as a supportive mechanism that enhances learners' writing development, provided that technological tools are introduced in a structured and pedagogically guided manner. Research examining augmented reality and AI-based platforms reports generally positive learner perceptions, particularly when such tools are designed to be user-friendly and aligned with instructional goals (Milad & Fayez, 2025). Similarly, survey-based investigations across secondary and tertiary contexts demonstrate that learners exhibit high awareness of AI tools such as ChatGPT and Duolingo, though actual usage in academic writing remains cautious and inconsistent due to uncertainty regarding effectiveness and academic norms (Farneste & Bicjutko, 2025). Studies grounded in technology acceptance frameworks further suggest that perceived ease of use strongly influences perceived usefulness and learner attitudes, reinforcing the role of usability as a foundational condition for successful scaffolding (Du et al., 2025) . Across these investigations, AI-assisted scaffolding is framed not as a replacement for writing instruction, but as an enabling layer that supports skill acquisition, particularly in drafting, language refinement, and task engagement. However, the findings also imply that without explicit instructional mediation, learners may struggle to integrate AI tools meaningfully into academic writing practices, limiting their potential impact on higher-order learning outcomes.

A recurrent focus in the literature concerns learner perceptions, ethical considerations, and contextual factors shaping AI-supported scaffolding in academic writing. Mixed-method and qualitative studies across diverse cultural and disciplinary settings highlight that learners generally recognize AI tools as beneficial for improving linguistic accuracy, vocabulary use, and writing efficiency (Rafida, Suwandi, & Ananda, 2024; Pakdel et al., 2025). At the same time, these studies emphasize persistent concerns related to overreliance, reduced creativity, academic integrity, and authenticity. Research scholars and university students frequently describe AI tools as moderately effective, while also identifying limitations such as insufficient cultural sensitivity, lack of personalization, and incomplete topic coverage (Anthony, Sharma, & Sharma, 2025). Discipline-specific analyses, particularly in medical education, further reveal a complex balance between strengths and risks, where AI scaffolding enhances language development but introduces threats related to misinformation and ethical misuse (Pakdel et al., 2025). In English-medium instruction contexts, the absence of systematic academic writing support amplifies these tensions, underscoring the need for coherent institutional frameworks that integrate AI tools into broader pedagogical strategies (Matikainen, 2024). Collectively, these findings suggest that effective scaffolding through AI requires not only technological access but also ethical guidance, policy clarity, and instructional alignment to ensure that learner autonomy and academic standards are preserved.

Pedagogical implications emerging from the reviewed abstracts consistently highlight the importance of guided, reflective, and feedback-oriented AI integration in academic writing instruction. Empirical evidence from

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automated writing evaluation studies indicates that tools such as Grammarly can function as effective scaffolds for identifying linguistic weaknesses, particularly in grammar and sentence construction, thereby supporting learners' revision processes (Tambunan et al., 2022). These tools are shown to assist instructors by providing timely corrective feedback, although their effectiveness is contingent upon complementary teacher mediation and learner reflection. Studies focusing on comparative instructional contexts emphasize that AI scaffolding is most beneficial when embedded within structured curricula that explicitly address writing challenges and learning objectives (Matikainen, 2024; Farneste & Bicjutko, 2025). Furthermore, research involving cross-national EFL contexts illustrates that AI-enhanced scaffolding promotes efficiency and confidence but must be carefully regulated to avoid superficial learning and dependence (Rafida et al., 2024). Overall, the literature positions AI-assisted scaffolding as a pedagogical enhancement that supports academic writing development when applied as a supplementary, critically framed tool rather than as a standalone solution.

Theme 3: Pedagogical Practices, Instructional Design, and Automated Feedback in AI-Supported Writing

This theme (Table 6) focuses on pedagogical implementation, instructional strategies, automated writing evaluation, feedback mechanisms, and measurable writing outcomes associated with AI-supported academic writing.

Table 6- Theme 3

PS	Article Title
5	Linguistic and Visual Patterns of ChatGPT in Higher Education
8	Teaching Research Writing with AI
11	A Mixed-Method Study on the Effectiveness of Using ChatGPT
13	English Writing Competence and EMI Performance
15	Scrutinizing the Impacts of Grammarly Application
18	Artificial Intelligence Tools in Academic Writing Instruction
21	Peer and Automated Writing Evaluation (AWE)
22	Investigating EFL Students' Linguistic Problems Using Grammarly
23	Exploring the Integration of Automated Feedback Among Lower-Proficiency EFL Learners

The reviewed studies demonstrate that AI-assisted scaffolding has become a prominent instructional mechanism for supporting academic writing development across higher education contexts, particularly through automated feedback, generative tools, and structured instructional interventions. Analyses of AI-supported theses writing reveal recurring linguistic and visual patterns in AI-assisted texts, suggesting that generative systems influence discourse organization and argumentative structures in predictable ways (Peña-Cáceres et al., 2025). These patterns highlight how AI scaffolding can standardize certain rhetorical features, which may support novice writers in meeting academic conventions but also raise concerns about textual similarity and homogenization. Empirical classroom-based studies further show that AI tools such as ChatGPT significantly improve writing outcomes when embedded within structured learning designs, especially by assisting idea generation, organization, and drafting processes (Apriani et al., 2025). Similarly, instructional applications of on-demand AI tools at advanced proficiency levels indicate increased familiarity with academic writing processes and improved competence in text production (Krajka & Olszak, 2024). Collectively, these findings suggest that AI-assisted scaffolding can enhance academic writing performance when applied as a supportive layer that complements instructional goals, rather than functioning as an autonomous writing agent.

Pedagogical research focusing on instructional design and faculty-led interventions emphasizes that the effectiveness of AI scaffolding is closely linked to guided implementation, learner preparation, and ethical framing. Case studies examining AI-integrated academic development courses report high learner engagement and perceived usefulness, particularly in practice-oriented formats that allow hands-on interaction with AI tools (Akhmedjanova et al., 2025). However, such studies also identify challenges related to cognitive load, uneven AI literacy, and ethical awareness, indicating that scaffolding must extend beyond tool access to include explicit instruction on responsible use. In English-medium instruction contexts, discrepancies between students' perceived writing competence and expert evaluations further underline the need for structured academic writing support tailored to disciplinary demands (Roothooft et al., 2025). Automated writing evaluation tools, such as Grammarly, are consistently reported to reduce time spent on lower-level language correction and to improve surface-level accuracy, particularly during high-stakes writing tasks like thesis preparation (Suryanto et al., 2024). These findings collectively position AI-assisted scaffolding as most effective when integrated into pedagogical frameworks that combine automated feedback, instructor mediation, and opportunities for reflection, ensuring that learners remain cognitively engaged rather than reliant on automated corrections.

Across learner-centred and feedback-oriented studies, the literature reveals a nuanced picture of how AI scaffolding shapes academic writing development, especially among EFL learners and lower-proficiency writers. Research comparing peer feedback and automated evaluation indicates that while students value the efficiency and immediacy of AI feedback, human feedback remains essential for addressing meaning, audience awareness, and higher-order concerns (Ginting & Fithriani, 2022). Exploratory studies involving lower-proficiency learners show positive perceptions of automated feedback systems, yet limited evidence of substantial improvement in revised drafts, suggesting that feedback alone is insufficient without instructional guidance (Huang & Renandya, 2018). Investigations into Grammarly-based feedback further identify persistent linguistic challenges, particularly in grammar and sentence structure, reinforcing the role of AI as a diagnostic scaffold rather than a comprehensive solution (Tambunan et al., 2022). Together, these studies indicate that AI-assisted scaffolding supports academic writing development most effectively when combined with pedagogical strategies that foster critical engagement, iterative revision, and balanced use of automated and human feedback. The accumulated evidence underscores the importance of positioning AI as a supplementary scaffold that enhances writing instruction while preserving learner agency and academic rigor.

CONCLUSION

The purpose of this systematic literature review was to synthesize empirical evidence on how artificial intelligence functions as a scaffolding mechanism in academic writing within higher education. Using the PRISMA protocol, studies published between 2020 and 2026 were systematically identified, screened, and evaluated from the Web of Science and Scopus databases, resulting in 23 primary studies that met the inclusion and quality criteria. The review was guided by three research questions addressing learner engagement, agency, and affective responses; perceptions, acceptance, and ethical considerations; and pedagogical practices, instructional design, and automated feedback in AI-supported writing. By consolidating fragmented research across diverse educational contexts and methodological approaches, the review addressed an important gap in the literature, offering a comprehensive overview of how AI-assisted tools contribute to academic writing development. The findings confirm that AI-supported scaffolding has become an increasingly prominent feature of writing instruction, yet its effectiveness depends strongly on pedagogical alignment, structured implementation, and ethical framing.

Key patterns and thematic insights emerged across the studies that we reviewed. AI-facilitated scaffolding was also found to increase engagement, promote agency, and lower affective filters like writing anxiety, especially if the feedback was multimodal and situated within instructional sequences. Second, students and teachers held positive attitudes toward AI technologies, and perceived usefulness and ease of use significantly contributed to the acceptance. Nevertheless, ethical issues based on over-dependence, authenticity, academic honesty, and transparency were recurrently emphasized, reflecting the necessity for guidelines and institutional policies. Third, pedagogical behaviour and instructional design were found to be strong predictors of learning performance. The automated feedback tools were successful in supporting lower-level writing processes (for example, grammar, sentence construction), but higher-order writing development relied on instructional mediation, a reflective activity, and an equitable integration of human and automated feedback. Together, these findings provide a synthesized view to demystify that AI works best as an adjunct scaffold rather than a self-

sufficient writing solution and offer a framework that integrates cognitive, affective, ethical, and pedagogical dimensions of AI-assisted academic writing.

This review adds value to the field by integrating fragmented findings into a systematic theme-based framework that enhances our understanding about AI-facilitated scaffolding in academic writing. The synthesis has implications for practice that is relevant to education by emphasising the need for supported integration of AI, curriculum writing, and ethical considerations in teaching writing. These findings can inform instructional design, professional development, and policy around responsible AI use by educators and institutions. However, a few restrictions should be mentioned. The review was limited to two databases, English language publication and a specified period of time; therefore some studies in other sources or languages may have been omitted. Furthermore, study design and reporting varied, hampering cross-study comparison. Future investigation would benefit from broader database inclusion, as well as longitudinal and experimental study designs and testing in subject-specific and cross-cultural contexts to enhance an evidence base. Additionally more research should be conducted on learner-AI interaction, development of ethics literacy, and assessment in AI writing. In general, this systematic review serves to demonstrate the importance of evidence-based synthesis in an emerging field, for it shows that sound literature reviews are crucial not only for theoretical development but also for the making of pedagogical decisions and responsible innovation in AI-driven academic writing.

REFERENCES

1. Abouzahra, A., Sabraoui, A., & Afdel.K. (2020). Model composition in Model Driven Engineering: A systematic literature review. Information and Software Technology, 125(106316).
2. Akhmedjanova, D., Suchkova, S., & Zharkova, N. (2025). Teaching Research Writing with AI: A Case Study of Academic Development Courses in Higher Education. Journal of Language and Education, 11(4), 112–130. https://doi.org/10.17323/jle.2025.26589
3. Anthony, A., Sharma, S., & Sharma, S. (2025). Is ChatGPT the Future of Academic Writing? A Sequential Explanatory Study to Explore Generative Conversational AI as an Academic Writing Support Tool for Research Scholars. Bulletin of Science, Technology and Society, 45(1–2), 23–39. https://doi.org/10.1177/02704676251353105
4. Apriani, E., Daulay, S., Aprilia, F., Gafur Marzuki, A., Warsah, I., Supardan, D., & Muthmainnah, M. (2025). A Mixed-Method Study on the Effectiveness of Using ChatGPT in Academic Writing and Students' Perceived Experiences. Journal of Language and Education, 11(1), 26–45. https://doi.org/10.17323/jle.2025.17913
5. Barrot, J., & Zhang, L. J. (2026). Learning Styles, Engagement and Anxiety in AI-Mediated Writing: A Multimodal Feedback Study. International Journal of Applied Linguistics. https://doi.org/10.1111/ijal.70120
6. Carrera-Rivera, A., Larrinaga, F., & Lasa, G. (2022). Context-awareness for the design of Smart-product service systems: Literature review. In Computers in Industry (Vol. 142). Elsevier B.V. https://doi.org/10.1016/j.compind.2022.103730
7. Dizon, G., & Gold, J. (2023). Exploring the effects of Grammarly on EFL students' foreign language anxiety and learner autonomy. JALT CALL Journal, 19(3), 299–316. https://doi.org/10.29140/jaltcall.v19n3.1049
8. Du, T. T., Dung, D. T. B., Ly, H. T. B., Huong, N. T. K., Triet, A. M., & Xuan, N. T. (2025). Students' Perceptions of Artificial Intelligence in Academic Writing: A Case at A University in Vietnam. Eurasian Journal of Applied Linguistics, 11(2), 122–134. https://doi.org/10.32601/ejal.11210
9. Farneste, M., & Bicjutko, T. (2025). ARTIFICIAL INTELLIGENCE INTEGRATION IN ACQUISITION OF ENGLISH ACADEMIC WRITING: A COMPARATIVE ANALYSIS OF STUDENT PERSPECTIVES IN SCHOOL AND UNIVERSITY SETTINGS. Baltic Journal of English Language, Literature and Culture, 15, 31–50. https://doi.org/10.22364/BJELLC.15.2025.03
10. Ginting, R. S. B., & Fithriani, R. (2022). PEER AND AUTOMATED WRITING EVALUATION (AWE): INDONESIAN EFL COLLEGE STUDENTS' PREFERENCE FOR ESSAY EVALUATION. LLT Journal: Journal on Language and Language Teaching, 25(2), 461–473. https://doi.org/10.24071/llt.v25i2.4879

11. Holmner, M., Hirsh, S., Meyer, A., Mierzecka, A., & Rorissa, A. (2025). The Future of Academic Writing in the Age of Generative AI. Proceedings of the Association for Information Science and Technology, 62(1), 1241–1243. https://doi.org/10.1002/pra2.1374
12. Huang, S., & Renandya, W. A. (2020). Exploring the integration of automated feedback among lower-proficiency EFL learners. Innovation in Language Learning and Teaching, 14(1), 15–26. https://doi.org/10.1080/17501229.2018.1471083
13. Khan, Z. I. (2025). Awareness, Adoption, Challenges and Effectiveness of AI Tools in Research Writing: Perspectives of Research Scholars from India and the United Arab Emirates. Journal of Web Librarianship, 19(3–4), 221–255. https://doi.org/10.1080/19322909.2025.2577988
14. Kim, M. K., & Kim, N. J. (2022). AI-Supported Scaffolding for Writing Academic Arguments. In C. Chinn, E. Tan, C. Chan, & Y. Kali (Eds.), Proceedings of International Conference of the Learning Sciences, ICLS (pp. 1129–1132). International Society of the Learning Sciences (ISLS). https://www.scopus.com/inward/record.uri?eid=2-s2.0-85145783495&partnerID=40&md5=7dfd0aecd9fe3b71d950afd88098ea92
15. Kim, M. K., Kim, N. J., & Heidari, A. (2022). Learner experience in artificial intelligence-scaffolded argumentation. Assessment and Evaluation in Higher Education, 47(8), 1301–1316. https://doi.org/10.1080/02602938.2022.2042792
16. Kitchenham, B., & Charters, S. (2007). Guidelines for Performing Systematic Literature Review in SOftware Engineering, Technical Report EBSE 2007-001,.
17. Krajka, J., & Olszak, I. (2024). ARTIFICIAL INTELLIGENCE TOOLS IN ACADEMIC WRITING INSTRUCTION: EXPLORING THE POTENTIAL OF ON-DEMAND AI ASSISTANCE IN THE WRITING PROCESS. Roczniki Humanistyczne, 72(6), 123–140. https://doi.org/10.18290/rh247206.8
18. Li, M., & Tekwa, K. (2025). Timing AI intervention in the writing process for low proficiency learners: relationship with motivation, self-efficacy, and performance. European Journal of Psychology of Education, 40(4). https://doi.org/10.1007/s10212-025-01030-9
19. Lo, Y. Y. (2025). Experiences of ESL Students and Instructors Using Grammarly in Academic Writing. Studies in English Language and Education, 12(3), 1313–1331. https://doi.org/10.24815/siele.v12i3.40518
20. Lockwood, C., Munn, Z., & Porritt, K. (2015). Qualitative research synthesis: Methodological guidance for systematic reviewers utilizing meta-aggregation. International Journal of Evidence-Based Healthcare, 13(3), 179–187. https://doi.org/10.1097/XEB.0000000000000062
21. Matikainen, T. (2024). Academic writing in English: Lessons from an EMI-program in Japan. Journal of English for Academic Purposes, 68. https://doi.org/10.1016/j.jeap.2024.101358
22. Milad, M., & Fayez, F. (2025). Perception and Attitudes towards Augmented Reality (AR) Enhanced Academic Writing: Satisfaction Levels. World Journal of English Language, 15(6), 268–288. https://doi.org/10.5430/wjel.v15n6p268
23. Moher D, Liberati A, Tetzlaff J, A. D. (2009). PRISMA 2009 Flow Diagram. In The PRISMA statement (Vol. 6, p. 1000097).
24. Moorhouse, B. L., Wan, Y., Wu, C., Wu, M., & Ho, T. Y. (2025). Generative AI tools and empowerment in L2 academic writing. System, 133. https://doi.org/10.1016/j.system.2025.103779
25. Ou, A. W., Stöhr, C., & Malmström, H. (2024). Academic communication with AI-powered language tools in higher education: From a post-humanist perspective. System, 121. https://doi.org/10.1016/j.system.2024.103225
26. Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. Systematic Reviews, 10(1). https://doi.org/10.1186/s13643-021-01626-4
27. Pakdel, F., Khojasteh, L., Kafipour, R., & Shahsavar, Z. (2025). Navigating AI writing tools in medical education: A SWOT analysis of L2 academic writing perspectives. Language Teaching Research. https://doi.org/10.1177/13621688251322953
28. Peña-Cáceres, O., Sánchez-Rogel, E., Barros-Naranjo, J., Silva-Marchan, H., Espinoza-Nima, R., & Correa-Calle, T. (2025). LINGUISTIC AND VISUAL PATTERNS OF CHATGPT IN HIGHER

EDUCATION An Analysis of its Use in Undergraduate and Postgraduate Theses. VISUAL Review. International Visual Culture Review / Revista Internacional de Cultura, 17(3), 265–278. https://doi.org/10.62161/revvisual.v17.5403

29. Qureshi, U. M., Tong, E. K.-M., Chen, Z. V, Deng, C., & Nandakumar, G. (2025). A Robust and Secure Framework for an AI-Assisted Academic Writing Platform. In T. Hao, J. G. Wu, X. Luo, Y. Sun, Y. Mu, S. Ge, & W. Xie (Eds.), Lecture Notes in Computer Science: 15589 LNCS (pp. 235–249). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-981-96-4407-0_20
30. Rafida, T., Suwandi, S., & Ananda, R. (2024). EFL STUDENTS' PERCEPTION IN INDONESIA AND TAIWAN ON USING ARTIFICIAL INTELLIGENCE TO ENHANCE WRITING SKILLS. Jurnal Ilmiah Peuradeun, 12(3), 987–1016. https://doi.org/10.26811/peuradeun.v12i3.1520
31. Roothooft, H., Breeze, R., & Meyer, M. (2025). ENGLISH WRITING COMPETENCE AND EMI PERFORMANCE: STUDENT AND EXPERT PERCEPTIONS OF ACADEMIC WRITING IN EMI. ESP Today, 13(1), 2–22. https://doi.org/10.18485/esptoday.2025.13.1.1
32. Smirnova, L. (2025). Developing students' agency and voice by using generative AI in an online EAP module. Innovation in Language Learning and Teaching. https://doi.org/10.1080/17501229.2025.2538781
33. Suryanto, S., Habiburrahim, H., Akmal, S., Zainuddin, Z., Safrul, M. S., & Hanani, F. (2024). SCRUTINIZING THE IMPACTS OF GRAMMARLY APPLICATION ON STUDENTS' WRITING PERFORMANCE AND PERCEPTION. Jurnal Ilmiah Peuradeun, 12(2), 465–490. https://doi.org/10.26811/peuradeun.v12i2.1235
34. Tambunan, A. R. S., Andayani, W., Sari, W. S., & Lubis, F. K. (2022). Investigating EFL students' linguistic problems using Grammarly as automated writing evaluation feedback. Indonesian Journal of Applied Linguistics, 12(1), 16–27. https://doi.org/10.17509/IJAL.V12I1.46428
35. Tekir, S. (2026). Generative AI use in EFL writing: associations with originality, critical reasoning, and metacognitive engagement in a Turkish higher education context. Computer Assisted Language Learning. https://doi.org/10.1080/09588221.2026.2617399
36. Werdiningsih, I., & Rusdin, D. (2024). Balancing AI and authenticity: EFL students' experiences with ChatGPT in academic writing. Cogent Arts and Humanities, 11(1). https://doi.org/10.1080/23311983.2024.2392388