PEDAGOGICAL CONDITIONS FOR DEVELOPING STUDENTS' ACADEMIC WRITING COMPETENCE THROUGH ARTIFICIAL INTELLIGENCE.

Mokhlaroyim Khamdamova Oybek qizi

English Language Student KIUF University Phone: +998 91 106 01 50

Annotation: This article examines the pedagogical conditions necessary for effectively developing students' academic writing competence by integrating artificial intelligence (AI) technologies into higher education. As global academic standards increasingly demand high-level research writing, clarity, and adherence to international publication ethics, educators face the challenge of equipping students with advanced text-production skills. This study outlines a comprehensive framework of pedagogical, methodological, and technological conditions—such as prompt engineering literacy, critical feedback literacy, scaffolded AI-assisted drafting, and ethical integrity safeguards. By establishing these conditions, institutions can transform AI from a mere shortcut into a cognitive partner that fosters critical thinking, structural coherence, and linguistic precision in academic discourse.

Keywords: Academic writing competence, artificial intelligence in education, pedagogical conditions, higher education, prompt literacy, automated feedback, research methodology.

Academic writing competence is a cornerstone of professional and scholarly development in higher education. It encompasses not only grammatical accuracy and stylistic appropriateness but also the ability to synthesize literature, construct rigorous arguments, formulate logical hypotheses, and communicate research findings in accordance with strict disciplinary conventions. However, many students struggle with the transition from general writing to formal academic discourse,

frequently encountering barriers such as writer's block, lexical limitations, structural disorganization, and uncertainty regarding citation and formatting standards.

In recent years, the rapid evolution of generative artificial intelligence (AI) and large language models (LLMs) has introduced unprecedented opportunities and challenges into academic environments. When deployed thoughtfully, AI tools can serve as dynamic scaffolding agents, providing real-time grammar correction, outlining assistance, vocabulary enhancement, and immediate formative feedback. Yet, the uncritical adoption of AI risks fostering intellectual passivity, plagiarism, and a decline in authentic critical thinking. Consequently, identifying and implementing precise *pedagogical conditions* is essential. These conditions ensure that AI acts as an intellectual catalyst rather than a replacement for human inquiry, systematically elevating students' academic writing competence.

Academic writing is an essential component of higher education because it enables students to communicate knowledge, evaluate evidence, and participate in disciplinary discussions. Academic writing competence extends beyond grammatical accuracy. It includes the ability to formulate a clear position, develop logically connected arguments, use sources responsibly, follow disciplinary conventions, and revise a text according to its purpose and audience.

Artificial intelligence introduces new opportunities for supporting these processes. Students can interact with AI systems to obtain explanations, identify weaknesses in a draft, explore alternative organizational patterns, and receive feedback on language use. However, access to an AI tool does not automatically produce learning. A polished text may conceal limited understanding if the student accepts generated suggestions without evaluating them.

The central pedagogical question is therefore how AI-supported activities can strengthen students' own writing decisions. This paper aims to identify the conditions under which AI can be integrated into academic writing instruction while preserving intellectual responsibility and supporting independent competence.

Theoretical Background and Approach

This paper adopts a conceptual approach based on selected literature concerning automated written feedback and human-centred AI integration. It does not report a classroom experiment or claim statistically demonstrated improvements.

Shi and Aryadoust's systematic review examined 83 studies of automated written feedback published between 1993 and 2022. The review identified positive, negative, neutral, and mixed findings, indicating that the effectiveness of automated feedback cannot be assumed across all contexts [1]. Because the reviewed studies largely predate widespread generative AI use, their findings provide background for instructional design rather than direct proof of the effectiveness of contemporary conversational tools.

UNESCO's guidance emphasizes a human-centred approach to generative AI in education, including pedagogical validation, human agency, equity, and data privacy [2]. These principles support an instructional model in which teachers guide AI use and students remain accountable for their academic work.

Building on these perspectives, the following pedagogical conditions are proposed for academic writing classrooms.

Main Discussion: Essential Pedagogical Conditions

1. Clearly defined writing objectives

AI-supported tasks should begin with specific learning objectives. These may include developing a defensible thesis statement, connecting evidence to claims, improving paragraph coherence, or distinguishing summary from critical analysis.

For example, when the objective is argumentative coherence, students can ask AI to identify a paragraph in which the connection between a claim and its evidence is unclear. The student then determines whether the criticism is justified and revises the paragraph independently. This connects technology use to an identifiable writing skill.

2. Explicit instruction in academic writing

Students need direct instruction in text structure, argumentation, paraphrasing, citation, and disciplinary language. Teachers should explain these features through authentic examples before asking students to evaluate AI suggestions.

A student who understands paragraph structure can judge whether a proposed revision improves the relationship between the topic sentence, supporting evidence, and interpretation. Without this foundation, revision may become a process of accepting changes whose purpose remains unclear.

3. Teacher modelling and guided interaction

Teachers should demonstrate how to formulate focused requests and evaluate the resulting feedback. Effective prompts specify the writing purpose, relevant criteria, and the type of assistance required.

A classroom prompt might be:

"Read this paragraph and identify two weaknesses in its argument. Explain why they matter and ask questions that would help me revise it."

The teacher can model how to accept a useful suggestion, modify a partially relevant one, or reject advice that changes the intended meaning. Guidance should gradually decrease as students demonstrate stronger judgement.

4. Critical evaluation of automated feedback

AI feedback should be treated as a proposal requiring examination. Students should consider whether a suggestion is accurate, relevant to the task, consistent with disciplinary conventions, and faithful to their argument.

A feedback log can record the original passage, the suggested change, the student's decision, and the reason for that decision. This makes revision a visible intellectual process. It also encourages students to distinguish between changes that improve reasoning and changes that merely make the language sound more formal.

5. Integration of AI, teacher, and peer feedback

The proposed framework combines several sources of feedback. AI can provide an additional response to a draft, while teachers and peers contribute contextual knowledge and engage students in discussion.

For instance, students may first examine automated comments on clarity, then discuss their argument with a peer, and finally consult the teacher about evidence or disciplinary expectations. Students should compare the comments and resolve disagreements through reasoned judgement rather than automatically privileging any single source.

6. Transparent authorship and responsible source use

Course expectations should explain which forms of AI assistance are permitted and how students should disclose their use. Students should retain responsibility for the argument, factual accuracy, references, and final wording.

Any source suggested by AI must be located and checked before citation. Students should verify that the publication exists and that it supports the associated claim. They should also avoid uploading confidential information or identifiable participant data.

A brief disclosure statement can describe the tool used, the purpose of its use, and how the student evaluated its contribution.

7. Differentiated and equitable support

AI-supported activities should match students' language proficiency and writing experience. Beginning writers may work on sentence clarity and paragraph organization, whereas advanced writers may examine counterarguments, synthesis, and disciplinary positioning.

Tasks should also remain achievable for students with unequal technological access. Teachers can provide shared feedback examples, supervised access, or equivalent peer-review activities. Assessment should reward demonstrated learning rather than access to more advanced tools.

8. Reflection and assessment of independent competence

Assessment should include both the final text and evidence of the writing process. Initial drafts, revision logs, source notes, and short reflections help teachers understand how students reached their final decisions.

AI-free writing tasks are also necessary to examine whether learning transfers to independent performance. A student may produce an improved assignment with assistance yet still struggle to construct a coherent argument alone. Comparing supported work with independent writing provides a more meaningful picture of competence.

Proposed Classroom Implementation

The framework can be implemented through a six-stage sequence:

1. Preparation: The teacher introduces the academic genre, assessment criteria, and permitted AI uses.
2. Independent drafting: Students write an initial text using verified source materials.
3. Focused AI consultation: Students request feedback on one or two specified criteria.
4. Feedback evaluation: Students explain which suggestions they accept, modify, or reject.
5. Revision and discussion: Students revise their work and discuss unresolved issues with peers or the teacher.
6. Reflection and transfer: Students submit a process record and complete a related independent writing task.

This sequence is intended to make students' reasoning observable. Its effectiveness should be investigated through classroom research rather than presumed.

Conclusion

Developing academic writing competence through artificial intelligence requires purposeful pedagogical organization. The proposed conditions include clear

objectives, explicit instruction, guided interaction, critical feedback evaluation, combined human and automated support, transparent authorship, equitable access, and assessment of independent performance.

Teachers should begin with limited, clearly defined AI-supported activities and require students to explain their revisions. Future research should examine whether these practices improve independent argumentation, source integration, and revision skills over time. The key educational outcome is students' growing ability to make informed writing decisions and apply them beyond an AI-assisted assignment.

References.

1. Bahja, M., et al. (2023). Generative Artificial Intelligence in Higher Education: Applications, Challenges, and Pedagogical Implications. *Journal of Educational Technology Systems*, 52(2), 145–168.
2. Chan, C. K. Y. (2023). A comprehensive AI policy education framework for university teaching and learning. *International Journal of Educational Technology in Higher Education*, 20(1), 38.
3. Elstad, E., & Eriksen, H. (2024). Harnessing AI in Secondary and Higher Education to Enhance Writing Competence. *Computers and Education: Artificial Intelligence*, 6, 100215.
4. Hyland, K. (2003). *Second Language Writing*. Cambridge University Press. (Akademik yozuv va janrga asoslangan yondashuvlar bo'yicha klassik manba).
5. Liang, J., et al. (2024). Prompt Literacy and Critical Evaluation of AI-Generated Texts in Academic Writing. *Computers & Education*, 210, 104958.
6. Swales, J. M. (1990). *Genre Analysis: English in Academic and Research Settings*. Cambridge University Press. (Akademik diskurs va matn tuzilishi nazariyasi).

7. Barker, J., & Pinard, M. (2022). Automated Writing Evaluation (AWE) Systems and Formative Feedback Loops in Student Composition. *Assessment & Evaluation in Higher Education*, 47(5), 712–728.
8. Abedin, M. Z. (2025/2026). Pedagogical Use of Responsible Generative AI in Higher Education Curricula. *Higher Education Research & Development*, 44(3), 305–320.