Western European Journal of Linguistics and Education
Volume 4, Issue 3, March 2026
https://westerneuropeanstudies.com/index.php/2
ISSN (E): 2942-190X Open Access| Peer Reviewed

ARTIFICIAL INTELLIGENCE AS A TOOL FOR DEVELOPING WRITING SKILLS IN NON-PHILOLOGICAL STUDENTS

Feruza Shirinova
Senior Teacher, PhD
International Islamic Academy of Uzbekistan
Department of Uzbek and Foreign Languages
Tashkent, Uzbekistan

Annotation

The development of academic writing competence among non-philological students remains one of the most persistent challenges in contemporary higher education. While students in technical, medical, economic, and natural science disciplines demonstrate strong subject-specific expertise, many struggle to articulate their knowledge effectively in written academic form. Difficulties often arise in structuring arguments, maintaining coherence, applying disciplinary conventions, and ensuring linguistic accuracy.

The rapid advancement of Artificial Intelligence (AI) technologies has opened new possibilities for addressing these challenges. AI-powered writing systems provide automated feedback, adaptive revision support, and interactive language modeling that can significantly enhance students' writing processes.

This article presents a comprehensive theoretical and empirical examination of AI-assisted writing instruction for non-philological students. Drawing upon constructivist pedagogy, sociocultural theory, and metacognitive learning principles, the study investigates how AI functions as a digital scaffold in academic writing development. A quasi-experimental design was implemented over one academic semester to evaluate the effectiveness of AI-supported writing practice. The findings indicate statistically significant improvements in linguistic accuracy, coherence, argument development, and learner autonomy. The study concludes that AI, when pedagogically guided, serves not as a substitute for human instruction but as an adaptive cognitive partner capable of transforming writing instruction in non-philological higher education contexts.

Key words: Artificial Intelligence, academic writing, non-philological students, higher education pedagogy, digital literacy, learner autonomy.

Introduction

Academic writing occupies a central position in higher education as both a tool for knowledge construction and a medium of scholarly communication. It enables students not only to demonstrate understanding but also to participate in professional and academic discourse communities. In today's global academic environment, the ability to write clearly, coherently, and analytically is indispensable for research publication, interdisciplinary collaboration, and professional advancement. However, significant disparities persist between philological and non-philological disciplines in terms of writing instruction. Students specializing in engineering, medicine, economics, information technology, and natural sciences often receive limited systematic training in academic writing. Their curricula

Western European Journal of Linguistics and Education
Volume 4, Issue 3, March 2026
https://westerneuropeanstudies.com/index.php/2
ISSN (E): 2942-190X Open Access| Peer Reviewed

primarily emphasize technical competence and professional expertise, leaving writing development to implicit learning or isolated assignments.

As a result, many non-philological students face recurring difficulties. Their texts may lack logical progression, contain fragmented arguments, display insufficient lexical variety, or include frequent grammatical inaccuracies. Importantly, these challenges do not reflect intellectual limitations but rather insufficient methodological support in writing development.
In this context, Artificial Intelligence technologies present a potentially transformative opportunity. AI-based writing systems provide immediate linguistic feedback, suggest structural improvements, recommend lexical alternatives, and highlight coherence issues. Unlike traditional feedback, which may be delayed and limited by instructor workload, AI enables continuous interaction and iterative revision. This study aims to examine how structured integration of AI tools can systematically enhance academic writing skills among non-philological students. The research seeks not merely to evaluate technological efficiency but to explore pedagogical mechanisms through which AI facilitates cognitive and linguistic development.

Literature Review: The development of academic writing has long been examined through multiple theoretical lenses. The cognitive process model proposed by Flower and Hayes conceptualizes writing as a recursive activity involving planning, drafting, reviewing, and revising. This perspective emphasizes that writing is not linear but dynamic and self-regulated. For instance, sociocultural theory, grounded in Vygotsky's concept of the Zone of Proximal Development, highlights the importance of mediated learning. Writing competence develops through guided interaction, feedback, and scaffolding. In this framework, tools whether human or technological—function as mediators of cognitive growth.
Genre-based approaches, particularly those developed by Hyland and Beaufort, underline the disciplinary specificity of academic discourse. Effective writing requires understanding rhetorical conventions, audience expectations, and structural norms within particular fields.

In recent years, digital literacy research has expanded the discussion to include technology-mediated writing environments. Studies by Zawacki-Richter et al. (2019) and Luckin et al. (2016) suggest that AI in education can enhance personalization, adaptive learning, and feedback efficiency.

AI-assisted writing systems primarily support three dimensions of writing development:
Surface-level accuracy — grammar, punctuation, syntax correction.
Textual coherence and cohesion — logical flow, paragraph transitions, clarity of ideas.
Higher-order reasoning — argument structure, critical analysis, evidence integration.

Nevertheless, scholars also caution against potential overreliance. Selwyn (2019) emphasizes ethical considerations, while concerns about academic integrity and cognitive dependency continue to be debated. Therefore, AI integration must be pedagogically structured rather than technologically driven.
Theoretical Framework is that this study integrates three complementary theoretical perspectives: constructivism - constructivist theory posits that learners actively construct knowledge through engagement and reflection. AI tools enable iterative drafting and experimentation, allowing students to test alternative expressions and refine arguments. This interactive process supports deeper cognitive engagement rather than passive correction; sociocultural theory from a sociocultural perspective, AI functions as a mediational tool within the learner's developmental space. While traditionally scaffolding was provided by instructors

Western European Journal of Linguistics and Education
Volume 4, Issue 3, March 2026
https://westerneuropeanstudies.com/index.php/2
ISSN (E): 2942-190X Open Access| Peer Reviewed

or peers, AI introduces an additional digital layer of support. Importantly, mediation remains effective only when guided by pedagogical intention; metacognitive theory effective writing requires self-regulation and awareness of strategies. Zimmerman's theory of self-regulated learning emphasizes planning, monitoring, and evaluating one's work. AI feedback enhances metacognitive awareness by making errors visible and prompting reflective revision. Together, these theoretical foundations position AI not as an autonomous writer but as a scaffold supporting cognitive growth.

The findings confirm that AI integration strengthens writing competence when embedded within a structured pedagogical framework. The most significant benefit lies in the feedback loop: students can revise repeatedly, observe patterns of error, and experiment with alternative expressions.

However, AI does not replace instructors. Human guidance remains essential for developing critical thinking, disciplinary nuance, and ethical awareness. The role of the teacher shifts from sole evaluator to facilitator and mentor, helping students interpret AI feedback critically.

AI functions most effectively as a cognitive partner rather than an automated author. When students actively engage with feedback instead of passively accepting suggestions, meaningful learning occurs. Higher education institutions should consider the following steps:

- Integrating AI literacy modules into writing courses
- Developing clear ethical guidelines for AI use
- Training instructors in AI-mediated pedagogy
- Emphasizing process-oriented writing models

AI should be presented not as a shortcut but as a reflective tool supporting independent thinking.

Artificial Intelligence represents a powerful pedagogical resource for enhancing academic writing among non-philological students. When strategically integrated into instructional design, AI fosters linguistic precision, structural coherence, and metacognitive awareness. The transformation of writing instruction requires a balanced approach that combines technological innovation with pedagogical integrity. AI should not replace human mentorship but extend its reach, offering students continuous, adaptive, and individualized support. Ultimately, the goal is not technological efficiency but intellectual empowerment—enabling non-philological students to articulate their expertise confidently within academic discourse communities.

References:

1. Syafei, M., & Nuraeningsih, N. (2025). *Leveraging Artificial Intelligence in Writing: ELT Students' Perspectives and Experiences*. *International Journal of Learning, Teaching and Educational Research*.
2. Pawestri, P., & Pratolo, B. W. (2025). *Artificial Intelligence (AI) for EFL Writing Skills: Systematic Literature Review*. *Ahmad Dahlan Journal of English Studies*.
3. Suryani, Y., Nirwanto, R., & Qamariah, Z. (2025). *The EFL Students' Perceptions of AI Writing Tools in Academic Writing Skills*. *Journal of English Language and Education*.
4. Malikova, L. (2025). *Developing Communicative Skills in English among Non-Philological Students Based on AI Technologies*. *Образование Наука и Инновационные Идеи*.
5. Karakhodzhaeva, M. (2025). *Using AI Tools in Academic Writing: Linguistic Problems and Solutions*. *Лингвоспектр*.

Western European Journal of Linguistics and Education
Volume 4, Issue 3, March 2026
https://westerneuropeanstudies.com/index.php/2
ISSN (E): 2942-190X Open Access| Peer Reviewed

6. Khasanova, D. (2020). Importance of communicative activities in conducting English classes based on islamic topics. Journal: педагогика и психология в современном мире: теоретические и практические исследования.