

THE IMPACT OF ARTIFICIAL INTELLIGENCE TOOLS ON THE ACADEMIC WRITING PERFORMANCE OF UZBEK EFL UNIVERSITY STUDENTS

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Abstract: This study examined the influence of AI tools (ChatGPT, Grammarly, QuillBot, Google Gemini) on the academic writing performance of 60 fourth-year EFL students at Samarkand State Institute of Foreign Languages. Using a 20-item Likert-scale questionnaire, the study assessed AI usage frequency, perceived benefits, and ethical concerns. Findings showed that most students regularly used AI to improve grammar, generate ideas, and expand vocabulary. While AI tools were perceived as beneficial, concerns about overdependence, reduced critical thinking, and academic integrity were also identified. The study concludes that AI can serve as a valuable supplementary resource when used responsibly under appropriate pedagogical guidance.

Keywords: artificial intelligence, academic writing, EFL students, ChatGPT, Grammarly, higher education.

Introduction

Academic writing is one of the most challenging skills for EFL learners, requiring grammatical accuracy, coherence, critical thinking, and discipline-specific vocabulary. In recent years, AI-powered tools such as ChatGPT, Grammarly, QuillBot, and Google Gemini have transformed writing instruction by providing immediate feedback, grammar correction, vocabulary suggestions, and paraphrasing assistance. Despite the rapid adoption of these tools in Uzbek universities, empirical evidence on their impact remains limited. This study addresses this gap by investigating how Uzbek EFL students use and perceive AI tools in academic writing contexts.

Literature Review

AI has evolved from basic grammar-checking systems to advanced large language models capable of generating coherent, contextually appropriate text. ChatGPT (OpenAI), in particular, has attracted global attention for its ability to draft essays, explain concepts, and simulate human-like dialogue. Studies such as Nazari et al. (2024) and Lee (2024) report that EFL learners perceive AI tools as effective for improving grammatical accuracy, enriching vocabulary, and boosting writing confidence. AI-based feedback has also been linked to greater learner autonomy and reduced writing anxiety (Ranalli, 2021).

However, researchers have raised concerns about academic dishonesty, overreliance on technology, and the potential erosion of critical thinking skills (Cotton et al., 2024; Bearman et al., 2023). In EFL contexts, while AI offers substantial linguistic support, responsible implementation guided by educators is essential. Studies in Uzbekistan on this topic remain

sparse, highlighting the need for context-specific research.

Methodology

Research Design and Participants

A quantitative descriptive design was employed. Sixty fourth-year undergraduate students (41 female, 19 male; 68.3% and 31.7% respectively) enrolled at SamSIFL were selected via convenience sampling. All participants had completed multiple academic writing assignments and reported familiarity with at least one AI writing tool.

Instrument and Data Analysis

A structured questionnaire comprising 20 five-point Likert-scale items (1 = Strongly Disagree to 5 = Strongly Agree) was developed after reviewing prior literature and validated by two experienced English language instructors. It measured AI usage frequency, perceived usefulness, influence on grammar and vocabulary, writing confidence, and ethical concerns. Data were analyzed using descriptive statistics (frequencies and percentages).

Results

RQ1: AI Tools Most Frequently Used

Table 1 shows the AI tools most commonly used by participants.

Table 1. AI Tools Used by Participants

AI Tool	Frequency	Percentage
ChatGPT	52	86.7%
Grammarly	46	76.7%
QuillBot	38	63.3%
Google Gemini	24	40.0%
DeepL Write	18	30.0%

ChatGPT was the most widely used tool (86.7%), followed by Grammarly (76.7%) and QuillBot (63.3%), confirming that Uzbek EFL students actively integrate AI into their writing practices.

RQ2 & RQ3: Perceived Benefits and Impact on Writing

Students generally held positive attitudes toward AI-assisted writing (Table 2).

Table 2. Students' Perceptions of AI Benefits

Statement	Agree/Strongly Agree
AI improves grammar accuracy	85.0%
AI expands academic vocabulary	80.0%
AI helps generate ideas	88.3%
AI improves essay organization	76.7%

AI increases writing confidence	73.3%
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Idea generation received the highest agreement (88.3%), indicating heavy reliance on AI during pre-writing. Additionally, 82% reported fewer grammatical errors, 78% improved vocabulary usage, 74% better coherence and organization, and 71% greater writing efficiency.

RQ4: Concerns Regarding AI Use

Table 3. Ethical and Educational Concerns

Concern	Percentage
Overdependence on AI	70.0%
Reduced critical thinking	63.3%
Academic dishonesty risks	75.0%
Difficulty distinguishing original ideas	56.7%

Academic dishonesty was the most significant concern (75%), followed by overdependence (70%) and reduced critical thinking (63.3%). These findings suggest students are aware of the risks associated with unrestricted AI use.

Discussion

The results confirm that AI tools have become integral to academic writing practices among Uzbek EFL students. High usage rates for ChatGPT and Grammarly reflect global trends reported in recent literature (Kasneci et al., 2023; Tlili et al., 2023). Students valued immediate feedback for independent revision, which aligns with findings on AI-enhanced learner autonomy (Godwin-Jones, 2022). The positive correlation between AI use and perceived writing improvement also supports earlier research by Nazari et al. (2024) and Lee (2024).

At the same time, concerns about academic integrity and overdependence highlight the need for balanced pedagogical approaches. Rather than prohibiting AI entirely, educators should train students to use these tools ethically and critically—as assistants for revision and reflection, not substitutes for genuine intellectual effort (UNESCO, 2023). Universities in Uzbekistan could incorporate AI literacy modules into writing courses to help students critically evaluate AI-generated suggestions and maintain academic standards.

Conclusion

This study demonstrates that AI tools positively influence the academic writing of Uzbek EFL learners when used responsibly. ChatGPT, Grammarly, and QuillBot were most frequently used and widely perceived as beneficial for grammar, vocabulary, idea generation, and writing confidence. However, risks related to overdependence and academic integrity require careful management. Future research should employ experimental or longitudinal designs with larger, multi-institutional samples and objective writing assessments to provide more comprehensive evidence.

Recommendations

- ✓ Instructors should provide explicit guidance on ethical AI use in academic writing.
- ✓ Universities should integrate AI literacy training into writing curricula.
- ✓ Students should use AI for brainstorming, proofreading, and revision—not for producing full assignments.
- ✓ Institutions should develop clear policies on acceptable AI use in academic contexts.

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