

## Effectiveness and Challenges of Artificial Intelligence Tools in IELTS Writing Instruction among Uzbek Secondary School Learners

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**Abstract.** *The integration of Artificial Intelligence (AI) into English language education has gained increasing attention due to its potential to provide personalized learning and immediate feedback. This mixed-methods study explores the effectiveness and challenges of using AI-based tools, including Engnovate, JumpInto, ChatGPT, and QuillBot, to facilitate IELTS writing instruction among Uzbek secondary school learners. The study involved 30 participants aged 15–17 from 10th and 11th grades in Tashkent, divided into a control group (n = 15) and an experimental group (n = 15). Participants were selected based on placement tests and an initial writing task. Quantitative data were collected through standardized English tests and IELTS-style writing tasks, while qualitative data were obtained from focus group discussions. The findings indicate that AI-supported instruction contributed to improvements in grammatical accuracy, lexical resource, coherence, cohesion, and overall learner engagement. Students reported increased motivation and positive attitudes toward writing due to instant feedback and interactive practice. However, the results also revealed challenges related to overreliance on AI tools, which negatively affected learners' critical thinking and independent writing skills. The study concludes that while AI tools can effectively support IELTS writing instruction, their use should be carefully guided to promote responsible and pedagogically sound integration.*

**Keywords:** *Artificial Intelligence, English Language Learning, IELTS Writing, Uzbek Students, Secondary Education*

### Introduction

English language proficiency is increasingly essential for Uzbek secondary school students seeking academic advancement and access to higher education both locally and internationally. In this context, achieving competitive scores on standardized tests such as IELTS has become a key requirement. Despite its importance, academic writing remains one of the most challenging skills for English as a Foreign Language (EFL) learners, as it requires mastery of grammatical accuracy, coherence, lexical range, and task response.

Traditional language teaching approaches, often based on rote learning and repetitive exercises, may not sufficiently address learners' individual needs or sustain engagement. Recent advancements in Artificial Intelligence (AI) have introduced new possibilities for language education by enabling personalized instruction, adaptive learning pathways, and automated feedback. AI-powered platforms can analyze learner performance and provide targeted support aligned with individual strengths and weaknesses.

Writing in an EFL context is a cognitively demanding process that integrates multiple linguistic and metacognitive skills (Allen & McNamara, 2017). Feedback plays a critical role in developing writing proficiency, and teacher-generated feedback has been shown to positively influence students' revision strategies and writing quality (Leki, 1991). However, teachers' ability to deliver timely and

individualized feedback is often constrained by large class sizes, time limitations, and workload pressures (Teng & Ma, 2024; Yu et al., 2021).

AI-driven feedback systems offer a potential solution by providing immediate and consistent responses to learners' writing. In line with Yan et al. (2024), automated feedback may complement teacher instruction and enhance learner autonomy. This study therefore investigates the effectiveness and challenges of integrating AI tools into IELTS writing instruction for Uzbek secondary school students and compares writing development across learners with Uzbek and Russian language backgrounds.

## **Methodology**

### **2.1 Research Design**

A mixed-methods approach was adopted to obtain a comprehensive understanding of the impact of AI tools on IELTS writing performance and learner perceptions.

### **2.2 Participants**

The study involved 30 participants from secondary education institutions in Tashkent, including students from 10th and 11th grades aged 15–17, as well as pre-service teachers. Participants were divided into a control group (n = 15) and an experimental group (n = 15).

### **2.3 Participant Selection**

Learners were selected based on placement test results and an initial IELTS-style writing task to ensure comparable proficiency levels across groups.

### **2.4 Instructional Procedure**

Both groups received instruction on IELTS writing criteria and relevant grammar structures. The experimental group additionally used AI tools—Engnovate, JumpInto, ChatGPT, and QuillBot—for grammar practice, writing development, and feedback aligned with IELTS descriptors: Task Response (TR), Grammatical Accuracy (GA), Coherence and Cohesion (CC), and Lexical Resource (LR). The control group followed traditional instruction without AI support.

### **2.5 Research Instruments**

Data were collected using:

1. Standardized English proficiency tests
2. IELTS-style writing task prompts
3. AI-based platforms (Engnovate, JumpInto, ChatGPT, QuillBot)
4. Focus group discussions for qualitative insights

## **Results and Discussion**

### **Results**

The quantitative findings showed that students in the experimental group demonstrated greater improvement in grammatical accuracy, lexical resource, and coherence compared to the control group. AI-supported learners also displayed higher levels of engagement and participation during writing activities.

Qualitative data revealed that learners perceived AI tools as highly beneficial due to instant feedback, interactive exercises, and model responses, which supported the application of language concepts in writing tasks. Many students reported increased motivation and confidence in completing IELTS writing assignments.

However, the results also indicated a growing dependency on AI tools, particularly for homework completion. Some learners relied on AI-generated responses rather than producing original writing, which limited opportunities for critical thinking and independent language production.

### **Discussion**

The findings suggest that AI tools can effectively enhance IELTS writing instruction by offering personalized feedback and fostering learner engagement. These results support existing literature emphasizing the role of automated feedback in EFL writing development (Yan et al., 2024).

At the same time, the study highlights the risk of overdependence on AI, which may hinder the development of critical thinking and autonomous writing skills. This underscores the importance of pedagogical guidance and ethical AI use in educational contexts. AI tools should be integrated as supplementary instructional aids, rather than replacements for learner-generated writing or teacher feedback.

Future research should examine long-term effects of AI-assisted writing instruction and explore instructional models that balance technological support with cognitive and metacognitive skill development.

### **Conclusion**

This study concludes that the integration of Artificial Intelligence tools such as Engnovate, JumpInto, ChatGPT, and QuillBot significantly enhances IELTS writing performance among Uzbek secondary school learners by improving grammatical accuracy, lexical resource, coherence, and overall engagement

The mixed-methods findings demonstrate that AI-supported instruction provides immediate, personalized feedback that increases learner motivation and confidence in academic writing tasks. However, the study also reveals notable challenges, particularly the risk of overreliance on AI-generated content, which may weaken critical thinking abilities and independent writing skills. Therefore, while AI tools present valuable pedagogical opportunities in EFL contexts, their implementation must be carefully guided to ensure responsible use and to maintain a balanced approach between technological assistance and learner autonomy.

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