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USING ARTIFICIAL INTELLIGENCE TO ENHANCE WRITING FEEDBACK IN TESOL CLASSROOMS

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Abstract

The integration of Artificial Intelligence (AI) into language education has increasingly attracted scholarly and pedagogical attention. In TESOL contexts, where providing individualized and timely feedback remains a persistent challenge, AI-based tools offer potential solutions to enhance writing development. This study investigates the impact of AI-assisted feedback on the writing performance of intermediate English as a Foreign Language (EFL) learners. Over a six-week instructional period, one group of students received traditional teacher feedback, while another group received a combination of teacher and AI-generated feedback. Pre- and post-intervention writing tasks were analyzed using standardized assessment criteria. The findings indicate that students exposed to AI-supported feedback demonstrated greater improvement in grammatical accuracy, lexical diversity, and revision strategies. The results suggest that AI technologies can effectively complement teacher instruction and promote learner autonomy when integrated thoughtfully within TESOL pedagogy.

Keywords

TESOL, Artificial Intelligence, EFL writing, corrective feedback, learner autonomy, educational technology, formative assessment.

Introduction. Feedback has long been recognized as a central component of effective language instruction, particularly in the development of writing skills. In TESOL classrooms, corrective feedback not only helps learners identify linguistic errors but also facilitates noticing, reflection, and long-term acquisition. However, many teachers face practical constraints such as large class sizes, limited instructional time, and administrative workload, which reduce the depth and frequency of individualized feedback. Consequently, learners may receive delayed or insufficient guidance, limiting opportunities for meaningful revision.

Recent advancements in Artificial Intelligence have introduced new possibilities for addressing these limitations. AI-powered writing tools are capable of analyzing student texts, identifying grammatical inconsistencies, suggesting lexical alternatives, and providing immediate corrective input. Unlike traditional feedback methods, AI systems operate in real time, allowing learners to revise drafts multiple times before submission. This immediacy may enhance metalinguistic awareness and promote self-regulated learning behaviors. Despite growing interest in AI-assisted instruction, empirical research examining its effectiveness in authentic TESOL classroom settings remains limited. The present study aims to explore whether integrating AI-generated feedback alongside teacher feedback leads to measurable improvement in student writing performance.

Methods. This study was conducted in a private language center offering English instruction to adult learners. A total of 50 intermediate-level EFL students participated in the research. Participants ranged in age from 18 to 25 and demonstrated comparable language proficiency levels based on institutional placement testing. The students were divided into two groups: a control group receiving traditional teacher feedback and an experimental group receiving both teacher feedback and AI-generated feedback.

At the outset of the study, all participants completed a diagnostic writing task designed to assess baseline proficiency. Essays were evaluated using a standardized rubric measuring grammatical accuracy, lexical resource, coherence and cohesion, and task achievement. During

the six-week intervention period, students completed weekly writing assignments focused on argumentative and opinion-based essays. The experimental group was instructed to revise their drafts using an AI-based writing assistant before submitting them to the teacher. The control group submitted their drafts directly for teacher evaluation without AI assistance.

At the conclusion of the study, all participants completed a post-test writing task under controlled classroom conditions. The same assessment rubric was applied to ensure consistency. Score comparisons between pre- and post-tests were used to determine the extent of improvement across both groups.

Results. The comparative analysis of writing scores revealed improvement in both groups; however, the experimental group demonstrated significantly greater gains across multiple assessment criteria. The most notable progress was observed in grammatical accuracy, where error frequency decreased substantially among students who utilized AI-assisted revision. Additionally, lexical diversity improved, with students in the experimental group employing a wider range of vocabulary and more precise word choices in their final drafts.

Furthermore, qualitative observation of student writing behavior indicated that learners exposed to AI feedback engaged more actively in the revision process. They demonstrated increased willingness to edit, restructure sentences, and experiment with alternative expressions. In contrast, students in the control group tended to make fewer revisions and relied primarily on teacher corrections without extensive self-editing. Although improvements were present in both groups, the data suggest that AI-supported feedback contributed to accelerated development of linguistic accuracy and revision strategies.

Discussion. The findings of this study highlight the pedagogical potential of AI-assisted feedback within TESOL writing instruction. The immediate nature of AI-generated corrections appears to enhance learner engagement and encourage iterative drafting. By receiving instant responses, students are able to identify recurring patterns of error and address them promptly, which may strengthen their noticing processes and facilitate internalization of language forms.

However, it is important to emphasize that AI tools primarily focus on surface-level linguistic features, such as grammar and vocabulary. They may not adequately address higher-order concerns including argument development, discourse organization, pragmatic appropriateness, or cultural nuance. Therefore, teacher expertise remains indispensable. Effective integration of AI requires a balanced approach in which technology functions as a scaffold rather than a replacement for human instruction.

Moreover, the use of AI may foster greater learner autonomy by shifting some responsibility for revision from teacher to student. When learners actively engage with feedback and make independent decisions regarding revisions, they develop critical thinking skills and self-monitoring strategies. Nevertheless, teachers must provide guidance to ensure that students critically evaluate AI suggestions rather than accepting them unreflectively.

Conclusion. The present study demonstrates that AI-assisted feedback can positively Influence writing performance in TESOL contexts, particularly in terms of grammatical accuracy and lexical development. While both traditional and AI-supported approaches contribute to learner improvement, the combination of teacher expertise and technological assistance appears to produce more substantial gains.

Despite these promising findings, AI should be implemented thoughtfully and ethically, with consideration for pedagogical goals, digital literacy, and data privacy concerns. The future of TESOL instruction lies not in replacing teachers with technology but in fostering a synergistic relationship between human expertise and intelligent systems. By integrating AI as a complementary tool, educators can enhance personalized learning while preserving the communicative and human-centered foundations of language education.

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