

The Role of Ai-Assisted Feedback in Developing Academic Writing Skills of EFL Students

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Abstract: This article explores the role of AI-assisted feedback in developing academic writing skills of EFL students. Academic writing is one of the most challenging skills for foreign language learners, as it requires not only grammatical accuracy but also logical organization, coherence, cohesion, appropriate vocabulary use, and academic style. In recent years, artificial intelligence tools have created new opportunities for improving students' writing competence by providing immediate, personalized, and formative feedback. The study discusses how AI-assisted feedback can support students in identifying errors, revising written texts, improving sentence structure, enriching vocabulary, and developing self-editing skills. Special attention is given to the pedagogical value of integrating AI tools into the writing process as a supportive mechanism rather than a replacement for teacher feedback. The article also highlights the importance of combining AI-generated feedback with teacher guidance and peer review to ensure critical thinking, learner autonomy, and responsible use of technology.

Keywords: AI-assisted feedback, academic writing, EFL students, writing skills, artificial intelligence, formative assessment, self-editing, teacher feedback, learner autonomy, English language teaching.

Introduction: Academic writing is one of the most essential yet challenging skills for students learning English as a foreign language. It requires the ability to express ideas clearly, organize arguments logically, use appropriate academic vocabulary, maintain coherence and cohesion, and apply grammatical structures accurately. For EFL students, academic writing is often difficult because they need to manage several linguistic, cognitive, and rhetorical demands at the same time. As a result, students frequently face problems related to grammar, sentence structure, paragraph development, organization of ideas, referencing, and academic style.

Feedback plays a crucial role in the development of academic writing skills. Through feedback, students become aware of their mistakes, understand the weaknesses of their written texts, and learn how to revise and improve their work. Traditionally, teacher feedback has been considered one of the main sources of support in writing instruction. However, in many educational contexts, teachers may not always have

enough time to provide detailed and individualized feedback to every student. This creates a need for additional supportive tools that can help students improve their writing more independently and effectively.

In recent years, artificial intelligence has become increasingly important in English language teaching and learning. AI-based tools can analyze students' written texts and provide immediate feedback on grammar, vocabulary, spelling, punctuation, sentence structure, coherence, and style. Such feedback can help students identify their errors, revise their drafts, and develop self-editing skills. AI-assisted feedback is especially useful in academic writing because it allows learners to receive continuous support during the writing process, not only after the final version of the text is submitted.

However, AI-assisted feedback should not be viewed as a complete replacement for teacher feedback. While AI tools can provide quick and useful suggestions, they may not always fully understand the purpose, context,

creativity, or deeper meaning of students' writing. Therefore, the most effective approach is to combine AI-generated feedback with teacher guidance and peer review. In this way, students can benefit from technological support while also developing critical thinking, reflective learning, and responsible use of digital tools.

The relevance of this study is determined by the growing role of artificial intelligence in language education and the increasing need to improve EFL students' academic writing competence. The use of AI-assisted feedback can make the writing process more interactive, student-centered, and formative. It encourages students to revise their texts, compare feedback, make independent decisions, and take greater responsibility for their own learning. At the same time, it requires careful methodological organization so that students use AI tools ethically and purposefully.

Feedback is considered one of the central components of effective writing instruction because it helps learners understand the gap between their current performance and expected academic standards. Hattie and Timperley [4] argue that feedback can strongly influence learning achievement when it answers three important questions: where the learner is going, how the learner is progressing, and what should be done next. From this point of view, feedback is not merely correction, but a formative process that guides students toward better performance. In academic writing, such guidance is especially important because students need to improve not only grammar, but also organization, coherence, cohesion, argumentation, and academic style.

In second language writing, feedback has traditionally been provided by teachers in the form of written corrective feedback. Ferris [3] emphasizes that written corrective feedback has been widely discussed in second language acquisition and L2 writing research, particularly in relation to its role in helping learners notice linguistic errors and improve accuracy. However, she also notes that the effectiveness of feedback depends on how it is delivered, how students understand it, and how they use it during revision. Therefore, feedback should be clear, purposeful, and connected with students' actual writing needs.

Similarly, Bitchener and Ferris [1] state that written

corrective feedback remains an important but complex issue in second language writing pedagogy. Their work shows that feedback is not limited to correcting grammar mistakes; it also supports students in developing greater awareness of language use, textual organization, and revision strategies. In this sense, feedback contributes to both linguistic competence and writing competence. For EFL students, who often have limited exposure to authentic academic English, systematic feedback can help them gradually develop control over academic vocabulary, sentence structure, paragraph unity, and logical development of ideas.

Hyland and Hyland [6] also highlight that feedback in second language writing is a socially and pedagogically complex process. They argue that effective feedback should take into account not only the text itself, but also the learner, the writing context, and the interaction between teacher and student. This idea is important for EFL academic writing because students may interpret feedback differently depending on their language level, motivation, previous learning experience, and confidence. Therefore, feedback should encourage revision rather than discourage learners. It should be supportive, understandable, and oriented toward future improvement.

The development of artificial intelligence has introduced new possibilities for feedback in academic writing. AI-assisted feedback tools can analyze students' written texts and provide immediate comments on grammar, spelling, punctuation, vocabulary, sentence structure, clarity, coherence, and style. Unlike traditional feedback, which may take time, AI-generated feedback is usually available instantly. This gives students more opportunities to revise their drafts several times before submitting the final version. Shute's [12] theory of formative feedback is relevant here, as she emphasizes that effective formative feedback should be timely, specific, supportive, and directed toward improving learning. AI-assisted feedback can meet some of these conditions when it is used carefully and pedagogically.

Automated Writing Evaluation systems have become increasingly common in EFL and higher education contexts. Recent systematic reviews show that AWE tools such as Grammarly, Criterion, and Pigai have been studied in relation to students' writing performance, revision behavior, engagement, and feedback uptake.

Ding et al. [2] report that AWE research has focused on major platforms such as Grammarly, Pigai, and Criterion, while other reviews emphasize that automated feedback can support argumentative and academic writing in EFL contexts. These studies suggest that AI-assisted feedback can be useful for improving surface-level accuracy and encouraging students to revise their writing more actively.

At the same time, AI-assisted feedback should not be understood as a replacement for teacher feedback. Although AI tools can identify many linguistic and stylistic problems, they may not always understand the deeper meaning, rhetorical purpose, cultural context, or originality of students' ideas. Wilson notes that automated writing evaluation systems may provide immediate feedback and reduce some barriers faced by teachers, but simply introducing technology does not guarantee better writing instruction. This means that AI feedback should be integrated into a clear pedagogical framework, where the teacher explains how to interpret, evaluate, and apply AI-generated suggestions.

Recent studies also show that AI-assisted feedback may have a positive effect on EFL learners' writing development. For example, Mekheimer's [10] study on generative AI-assisted feedback found that EFL students who used Grammarly improved their writing proficiency, revision frequency, and writing quality compared with traditional instruction. This supports the idea that AI feedback can increase students' engagement in the writing process and help them become more active revisers of their own texts. However, such improvement depends on students' ability to critically evaluate AI suggestions rather than accept them mechanically.

From a methodological perspective, AI-assisted feedback can be integrated into academic writing instruction through a process-based approach. In the pre-writing stage, students can use AI tools to brainstorm ideas, clarify the topic, and generate outlines. In the drafting stage, they can focus on developing arguments and organizing paragraphs. In the revision stage, AI feedback can help them identify grammatical errors, improve sentence clarity, avoid repetition, and strengthen coherence. Finally, teacher feedback and peer review can be used to evaluate the content, logic, originality, and academic value of the

text. This combination makes writing instruction more interactive and student-centered.

Therefore, the most effective model is a blended feedback model that combines AI-assisted feedback, teacher feedback, and peer feedback. AI feedback provides speed and individual support; teacher feedback provides pedagogical judgment and deeper explanation; peer feedback encourages collaboration, reflection, and critical thinking. Together, these forms of feedback can help EFL students develop academic writing skills more systematically. In this model, the role of the teacher changes from being the only source of correction to becoming a facilitator who guides students in using feedback critically and responsibly.

CONCLUSION

In conclusion, scholars' views on feedback show that it is a powerful factor in developing writing competence when it is formative, clear, timely, and connected with revision. AI-assisted feedback adds new opportunities to this process by giving students immediate and individualized support. However, its effectiveness depends on methodological organization, ethical use, and teacher guidance. For this reason, AI-assisted feedback should be regarded not as an independent solution, but as a supportive pedagogical tool that can enhance academic writing instruction in EFL contexts.

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