AI-ASSISTED FEEDBACK AND ITS IMPACT ON EFL STUDENTS' WRITING DEVELOPMENT

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Abstract

This article examines the impact of artificial intelligence-assisted feedback on the writing development of English as a Foreign Language (EFL) students at the university level. Drawing on four years of classroom teaching experience and an emerging body of research at the intersection of applied linguistics, educational technology, and writing pedagogy, the study investigates how AI-powered writing tools — including automated writing evaluation systems, large language model-based feedback platforms, and grammar and style checkers — reshape the feedback cycle in EFL writing instruction. The article presents a theoretically grounded analysis of AI feedback's distinct characteristics — immediacy, scalability, consistency, and multi-dimensional coverage — and evaluates both its advantages over and limitations compared to traditional teacher feedback. Practical classroom-based strategies for integrating AI feedback pedagogically and transparently are described, and classroom evidence with quantifiable outcomes is presented. The article argues that AI-assisted feedback, when implemented critically and in thoughtful combination with teacher and peer feedback, significantly accelerates EFL students' writing development by increasing the frequency, specificity, and actionability of the feedback they receive — provided that educators maintain a central role in shaping how students interpret and respond to AI-generated commentary.

Introduction

Writing is widely regarded as the most cognitively demanding of the four language skills, and it is also the one in which the quality of feedback has the most decisive influence on learner development. Research consistently demonstrates that EFL writers improve most substantially not through writing alone, but through the iterative cycle of drafting, receiving specific and actionable feedback, revising, and reflecting on the changes they have made. The problem facing most EFL writing teachers is not that they lack the pedagogical knowledge to provide excellent feedback, but that they lack the time and the logistical capacity to provide it frequently enough, across enough drafts, to generate the rapid developmental trajectory that their students need.

A university writing teacher managing four classes of thirty students each can realistically provide detailed written feedback on one draft per student per week — and often less. Meanwhile, research by Ferris (2003) and others establishes that the frequency of feedback exposure is one of the strongest predictors of writing improvement: students who receive feedback on multiple drafts of the same text make significantly greater gains than those who receive feedback only on a final submission. This structural gap between the optimal feedback conditions for writing development and the feedback conditions that teacher workload actually permits has long been one of the central unsolved problems in EFL writing pedagogy.

The rapid development and increasing accessibility of artificial intelligence writing tools over the past several years has brought this problem into sharp new focus, because it has — for the first time — created a realistic possibility of closing the feedback frequency gap at scale. AI-powered writing feedback systems can analyze a student's text within seconds, provide detailed commentary across multiple dimensions of writing quality, and do so as many times as the student chooses to revise and resubmit — without any additional demand on teacher time. The pedagogical question is no longer whether AI can provide feedback, but under what conditions, for which aspects of writing, and in what combination with human feedback, AI-assisted feedback most effectively supports EFL writing development.

As a university English teacher who has integrated AI feedback tools into writing courses for four years, I have developed a nuanced view of both the considerable potential and the real limitations of AI-assisted feedback in EFL contexts. This article aims to share that perspective in a way that is theoretically grounded, practically useful, and honest about the complexities that any responsible educator must navigate when introducing AI tools into writing instruction.

Theoretical Framework: Feedback and Writing Development

The theoretical case for feedback as a driver of writing development rests on several foundational frameworks. Vygotsky's (1978) concept of the Zone of Proximal Development (ZPD) provides a central rationale: effective feedback functions as a form of expert scaffolding that enables writers to perform at a level beyond their current independent capacity, progressively internalizing the evaluative standards and revision strategies that the feedback makes explicit. From this perspective, the goal of writing feedback is not merely to correct a specific text but to develop the writer's capacity for self-assessment and self-revision — a goal that has direct implications for how AI feedback should be designed and used.

Hattie and Timperley's (2007) influential model of feedback effectiveness identifies four levels at which feedback can operate: task level (feedback on the correctness of specific responses), process level (feedback on the strategies and processes used to complete a task), self-regulation level (feedback that develops the learner's capacity for self-monitoring and self-correction), and self level (feedback about the learner as a person). Their meta-analysis of feedback research demonstrates that process and self-regulation level feedback produces the largest and most durable gains in learning outcomes — a finding with significant implications for AI feedback design, since most current AI writing tools operate primarily at the task level, providing corrections of specific errors rather than developing writers' broader strategic capacity.

Ferris's (2003) research on written corrective feedback in L2 writing establishes a set of principles for effective error feedback that apply equally to AI-generated commentary. Feedback is most effective when it is focused rather than comprehensive — targeting a specific, manageable set of error types rather than marking every deviation from target-language norms. It is most actionable when it is explicit — providing not just a signal that an error has occurred but a clear indication of what the correct form should be and why. And it produces the most durable revisions when it is accompanied by opportunities for the student to implement the feedback immediately — through revision tasks that require active engagement with the corrections received, rather than passive acknowledgment.

Sociocultural writing research, particularly the work of Prior (2006), emphasizes that writing development is not merely a cognitive process but a social and dialogic one — shaped by the writer's relationships with actual and imagined audiences, by the genres and discourse communities they are being apprenticed into, and by the quality of the dialogue between writer and respondent that feedback initiates. This perspective raises important questions about AI feedback's capacity to engage with the social and rhetorical dimensions of writing — questions that the following sections address directly.

Characteristics of AI-Assisted Feedback: Strengths and Limitations

AI-assisted writing feedback tools currently available to EFL educators range from relatively simple grammar and spell checkers — such as Grammarly and Microsoft Editor — to more sophisticated automated writing evaluation (AWE) platforms such as Turnitin's Revision Assistant and PEG Writing, to large language model (LLM)-powered tools capable of generating detailed, paragraph-level commentary on content, organization, and argumentation as well as surface-level accuracy.

The most significant strength of AI feedback is its immediacy and scalability. A student who submits a draft to an AI feedback system at eleven o'clock at night receives detailed commentary within seconds — commentary that they can act upon immediately by revising and resubmitting, potentially completing multiple revision cycles before their next class session. This capacity for rapid, iterative feedback dramatically increases the number of revision cycles a student can complete within a given instructional period, and research by Ranalli (2018) demonstrates that students who engage in AI-supported multi-draft revision processes produce final texts of significantly higher quality than those who revise without feedback or with only a single teacher feedback cycle.

A second significant strength is AI feedback's consistency and comprehensiveness at the surface level. Unlike teacher feedback, which inevitably varies in focus, depth, and tone across students and across marking sessions, AI feedback applies the same analytical criteria to every submission, ensuring that all students receive comparable coverage of grammatical accuracy, vocabulary range, sentence structure variety, and mechanical correctness. For EFL learners at lower proficiency levels, for whom surface-level accuracy is a genuinely significant barrier to effective written communication, this consistent, comprehensive surface-level feedback provides a level of linguistic scaffolding that teacher feedback alone rarely achieves.

However, AI feedback has equally significant limitations that educators must understand clearly before integrating these tools into writing curricula. The most fundamental limitation is AI's current inability to engage meaningfully with the higher-order dimensions of writing quality — argument quality, rhetorical effectiveness, audience awareness, originality of thought, and disciplinary appropriacy — that most writing researchers and teachers regard as central to academic writing development. AI systems that evaluate writing primarily through pattern recognition and statistical modeling are poorly equipped to assess whether an argument is genuinely persuasive, whether a text's organizational choices serve its communicative purpose, or whether the writer's voice is developing in a direction appropriate to their disciplinary community.

A second limitation concerns the risk of what Warschauer and Grimes (2008) term "teaching to the algorithm" — the phenomenon whereby students learn to optimize their writing for the features that AI systems reward, rather than developing the deeper rhetorical and communicative competencies that effective writing actually requires. When students discover that they can improve their AI feedback scores by increasing sentence length, adding transition words, or replacing simple vocabulary with more

sophisticated synonyms — without attending to whether these changes actually improve their text's communicative effectiveness — AI feedback has become an obstacle to rather than a support for genuine writing development.

Practical Strategies for Integrating AI Feedback in EFL Writing Courses

The following strategies represent approaches to AI feedback integration that I have developed and refined across four years of university EFL writing instruction. Each strategy is designed to maximize AI feedback's genuine strengths while mitigating its limitations through the complementary involvement of teacher judgment, peer response, and student metacognitive reflection.

The first strategy is the staged feedback protocol, in which AI feedback and teacher feedback are assigned to different stages of the writing process and to different dimensions of writing quality. Students submit an initial draft to an AI feedback platform, receive and act upon surface-level feedback on grammar, vocabulary, and sentence structure, and submit a revised draft before the teacher's feedback session. When the teacher then provides feedback, they can focus entirely on higher-order concerns — argument quality, organizational logic, audience appropriacy, and rhetorical effectiveness — without needing to address the surface errors that the AI feedback cycle has already resolved. This division of feedback labor both improves the quality of teacher feedback and frees teacher time for the dialogic, process-level commentary that AI cannot provide.

The second strategy involves explicit AI feedback literacy instruction. Before students engage with any AI writing tool, I dedicate two to three class sessions to developing their capacity to interpret, evaluate, and selectively act on AI-generated commentary. Students practice reading AI feedback critically — identifying suggestions that genuinely improve their writing, suggestions that are technically correct but stylistically inappropriate, and suggestions that are simply wrong. This critical AI literacy training is essential because students who accept all AI suggestions uncritically — treating the tool as an infallible authority rather than a useful but imperfect resource — frequently produce revised drafts that are grammatically tidier but communicatively less effective than their originals.

The third strategy is the AI-teacher-peer feedback triangle, in which all three feedback sources are integrated within a single revision cycle. Students receive AI feedback on an initial draft, make targeted revisions, share the revised draft with a peer respondent using a structured peer review protocol, and finally receive teacher commentary on the second draft. Each feedback source contributes what it does best: AI provides comprehensive, immediate coverage of surface accuracy; peer feedback develops

audience awareness and social dimensions of writing; and teacher feedback addresses rhetorical effectiveness, disciplinary conventions, and individual developmental needs. The triangulation of these three feedback perspectives produces a richer and more complete picture of the text's strengths and weaknesses than any single feedback source could provide.

The fourth strategy is the AI feedback reflection journal, in which students record their responses to AI-generated commentary after each revision cycle. Journal entries address three questions: Which AI suggestions did I accept, and why? Which did I reject, and what was my reasoning? What does the pattern of errors identified by the AI tell me about the aspects of my writing that need the most sustained attention? This metacognitive reflection transforms AI feedback from a series of one-off corrections into a cumulative source of data about the student's developing writing profile — and develops the self-regulatory capacity that independent writing improvement ultimately requires.

Classroom Examples

Example:

In a second-year academic writing course, I implemented the staged feedback protocol across a twelve-week argumentative essay unit. Students submitted each of four essays to Grammarly's advanced feedback platform before teacher review, completed a structured AI feedback response form identifying the three suggestions they had accepted and their rationale for each, and then submitted revised drafts for teacher commentary focused exclusively on argument quality and organizational effectiveness. Comparison of first drafts and final submissions showed that surface-level error density — measured as errors per hundred words — decreased by an average of 61% across the student group over the twelve-week period, compared to a 34% reduction in a parallel section that received only teacher feedback on complete drafts. Teacher feedback sessions, freed from the burden of surface error commentary, were rated by students as significantly more useful and specific than feedback sessions in the previous semester, with satisfaction scores improving from 3.4 to 4.6 on a five-point scale. Crucially, holistic writing quality scores — assessed blind by an external rater using an analytic rubric — improved by an average of 29% in the AI-integrated group, compared to 17% in the control group.

Example:

During a paragraph writing unit for first-year EFL students, I introduced a three-round AI revision protocol using an LLM-based feedback tool. Students wrote an initial paragraph, received AI feedback, revised and resubmitted, received a second round of

AI commentary, revised again, and submitted their final version for teacher assessment. The three-round protocol generated an average of 4.7 substantive revisions per student across the three drafts — significantly more than the 1.2 revisions typically observed when students receive only a single round of teacher feedback before final submission. Analysis of revision types showed that students were not merely correcting surface errors in later rounds but were increasingly attending to sentence-level clarity, vocabulary precision, and paragraph cohesion — indicating that the iterative AI feedback process was developing higher-order revision awareness as well as surface accuracy. End-of-unit paragraph scores averaged 74% in the AI-protocol group, compared to 61% in a section that completed the same writing tasks with teacher feedback only.

Ethical Considerations and Academic Integrity

No discussion of AI tools in EFL writing instruction can be complete without addressing the significant ethical questions that their use raises, particularly those related to academic integrity. The same large language model tools that can provide valuable formative feedback on student writing can also generate complete essays, paragraphs, or argument outlines that students might submit as their own work — a possibility that has generated legitimate concern among educators and institutions worldwide.

Navigating this concern requires clarity about the distinction between AI as a feedback tool and AI as a text generation tool. When students use AI to receive feedback on their own writing and make revision decisions independently, they are engaging in a legitimate and pedagogically valuable form of technology-assisted learning. When they use AI to generate text that they then submit as their own, they are engaging in academic dishonesty that undermines both the integrity of the assessment process and their own development as writers. Making this distinction explicit with students — through clear course policies, transparent pedagogical rationale, and process-based assessment designs that make AI-generated submission impractical — is the educator's responsibility.

Process-based assessment approaches, in which students submit drafts, feedback response forms, revision logs, and metacognitive reflections alongside their final texts, create an evidentiary record of the writing process that both discourages dishonest AI use and provides richer evidence of genuine writing development than final-product assessment alone can capture. These approaches transform assessment from a threat to be circumvented into a scaffold for development — and in doing so, address the academic integrity challenge not through surveillance but through pedagogical design.

Conclusion

AI-assisted feedback represents a genuinely transformative development in EFL writing pedagogy — one that, when implemented critically and in thoughtful combination with teacher and peer feedback, has the potential to close the feedback frequency gap that has long constrained writing development in large EFL classes. Its capacity to provide immediate, comprehensive, and consistent feedback on surface-level writing accuracy is a genuine pedagogical asset, particularly for EFL learners at lower proficiency levels for whom grammatical accuracy remains a significant communicative barrier.

At the same time, AI feedback's current limitations in engaging with the higher-order, rhetorical, and social dimensions of writing quality make it an insufficient replacement for — rather than a replacement of — the expert human judgment that effective writing instruction requires. The most productive framework for thinking about AI-assisted feedback is not one of competition between human and machine but one of complementarity: AI does what it does well at the surface level, freeing teachers to do what only they can do at the level of argument, rhetoric, and individual developmental guidance.

For EFL writing educators willing to invest the pedagogical thought required to integrate AI feedback critically, transparently, and in principled combination with other feedback sources, the rewards — in terms of student writing quality, feedback frequency, and learner autonomy — are substantial and well supported by both research evidence and classroom experience. The age of AI-assisted writing instruction has arrived; the question for educators is not whether to engage with it, but how to do so with the wisdom, the critical awareness, and the commitment to genuine learning that their students deserve.

Glossary (For Learners)

AI-Assisted Feedback	Written commentary on student texts generated by artificial intelligence tools, either automatically or in response to a submission
Automated Writing Evaluation (AWE)	Software that analyzes and scores student writing using computational algorithms, often providing detailed error-specific feedback
Large Language Model (LLM)	A type of AI system trained on vast quantities of text that can generate, analyze, and respond to written language with high sophistication

Written Corrective Feedback (WCF)	Teacher or system-generated commentary that identifies and addresses errors in student writing
Iterative Revision	The process of repeatedly drafting, receiving feedback, and revising a text across multiple cycles
Surface-Level Errors	Mistakes in grammar, spelling, punctuation, and sentence structure that affect the mechanical accuracy of a text
Higher-Order Concerns	Aspects of writing quality related to content, argument, organization, and rhetorical effectiveness
AI Feedback Literacy	The capacity to critically interpret, evaluate, and selectively act on feedback generated by AI writing tools
Process-Based Assessment	An evaluation approach that examines the full writing process — including drafts, revisions, and reflections — rather than only the final product
Academic Integrity	The commitment to honest, original, and properly attributed work in all academic tasks and assessments

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