
CONFERENCE ARTICLE**Generative Ai Feedback And Self-Regulated Revision In Efl Academic Writing****Hikmatullayeva Shokhsanam Ulugbek kizi**

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Abstract: The increasing use of generative artificial intelligence in higher education has created new opportunities for providing immediate and individualized feedback on academic writing. For EFL students, generative AI can identify language problems, comment on organization and argumentation, suggest alternatives, and support repeated revision. However, the educational value of such feedback depends on learners' ability to regulate the revision process rather than accept AI recommendations automatically. This article examines the relationship between generative AI feedback and self-regulated revision in EFL academic writing. Particular attention is given to goal setting, feedback seeking, critical evaluation, revision decision-making, monitoring, reflection, and learner autonomy.

Keywords: generative AI, AI feedback, EFL academic writing, self-regulated learning, self-regulated revision, writing feedback, revision strategies, academic writing, learner autonomy, metacognition, feedback literacy, writing self-efficacy.

Introduction

Academic writing is a complex process that requires more than the production of grammatically correct sentences. University students are expected to generate and organize ideas, formulate arguments, integrate evidence, maintain coherence, employ an appropriate academic style, revise initial drafts, and evaluate the effectiveness of their own writing. For students learning English as a foreign language (EFL), these demands are particularly challenging because they must simultaneously manage academic content and the linguistic resources required to communicate that content effectively.

Revision represents one of the most important stages of academic writing. Effective writers rarely produce a successful academic text in a single attempt. They return to their drafts, reconsider arguments, reorganize information, clarify ideas, improve cohesion, correct language problems, and evaluate whether the text achieves its intended communicative purpose.

However, EFL students do not always approach revision strategically. Some learners interpret revision primarily as the correction of grammar, spelling, and vocabulary. They may make surface-level changes while paying insufficient attention to more substantial issues involving argumentation, organization, evidence, coherence, and reader expectations.

The emergence of generative artificial intelligence (GenAI) has introduced a new form of feedback into this process. Large language models can respond to student writing immediately, identify possible weaknesses, explain grammatical problems, comment on organization, propose alternative expressions, and engage students in repeated dialogue about their texts. Research has demonstrated considerable potential for using ChatGPT and related tools as sources of formative feedback in second-language and EFL writing [4–7].

Nevertheless, receiving more feedback does not necessarily result in better revision. A student may copy every AI suggestion without understanding it, reject useful feedback without sufficient consideration, or use AI to rewrite entire passages rather than develop independent revision abilities.

The important pedagogical issue is therefore not simply whether

generative AI can provide feedback, but how students regulate their engagement with that feedback.

This question connects AI-assisted writing directly with the concept of self-regulated learning (SRL). From a self-regulatory perspective, learners actively set goals, select strategies, monitor performance, evaluate outcomes, and adapt subsequent behaviour [1]. Applied to writing, self-regulation involves students taking increasing responsibility for planning, producing, monitoring, revising, and evaluating their own texts [2; 3].

The purpose of this article is to examine how generative AI feedback can support self-regulated revision in EFL academic writing and to propose pedagogical principles and classroom practices that position the learner, rather than the technology, at the centre of the revision process.

Materials And Methods

The study is theoretical and methodological in nature. It is based on the analysis and synthesis of research concerning self-regulated learning, self-regulated writing, generative AI feedback, EFL academic writing, and learner engagement with written feedback.

The theoretical foundation includes Zimmerman's cyclical model of self-regulated learning [1] and research applying self-regulation theory to second and foreign language writing [2; 3]. Particular attention is also given to recent empirical studies investigating the use of ChatGPT and generative AI as feedback tools in ESL and EFL writing contexts [4–8].

The methodological component of the study involves the development of a pedagogical framework that connects stages of self-regulated learning with specific forms of AI-supported writing revision. Classroom tasks are proposed to encourage students to seek targeted feedback, evaluate AI-generated recommendations, make independent revision decisions, document changes, and reflect on the relationship between feedback and their own writing development.

Self-regulated learning describes a process in which learners actively participate in their own learning rather than functioning as passive recipients of instruction.

Zimmerman conceptualizes self-regulation as a cyclical process involving three broad phases: forethought, performance, and self-reflection [1].

The forethought phase includes goal setting, planning, strategic decisions, motivation, and expectations regarding performance.

The performance phase involves applying strategies, monitoring progress, controlling attention, seeking appropriate assistance, and adapting actions while completing a task.

The self-reflection phase involves evaluating results, interpreting successes and difficulties, and using those conclusions to influence future learning behaviour.

These phases are especially relevant to academic writing because writing itself is recursive rather than completely linear.

A writer may formulate a goal, produce a paragraph, evaluate it, discover a problem, return to planning, revise the paragraph, and then evaluate it again.

Research on self-regulated EFL writing has demonstrated that successful writing involves multiple dimensions of regulation, including cognitive, metacognitive, social-behavioural, and motivational strategies [2].

Consider two students who make exactly the same grammatical correction.

Student A receives a corrected sentence from an AI system and copies it directly.

Student B receives feedback identifying the problem, studies the explanation, attempts a correction independently, compares the revision with the original version, and records the grammatical pattern in a personal error log.

The final sentence may be identical, but the learning processes are substantially different.

The second student demonstrates greater self-regulation because the feedback becomes part of a process involving awareness, decision-making, monitoring, and reflection.

Therefore, self-regulated revision can be defined as the learner's strategic management of the process of identifying writing problems, seeking and evaluating feedback, selecting appropriate changes, monitoring their effects, and reflecting on the implications for future writing.

This distinction becomes particularly important when generative AI is involved because AI systems can provide not only feedback but also complete corrections and rewritten passages.

The easier it becomes to obtain a revised text, the more important it becomes to ensure that the student remains intellectually involved in revision.

Traditional academic writing feedback may come from teachers, peers, tutors, or automated writing evaluation systems.

Generative AI introduces several additional possibilities.

Unlike conventional grammar checkers that primarily identify predetermined language patterns, generative AI can respond conversationally to individual requests and provide feedback on multiple aspects of writing.

Mahapatra found that ChatGPT used as a formative feedback tool could contribute positively to university students' academic writing development when integrated into the instructional process [4].

Similarly, research in EFL contexts has demonstrated that students often perceive AI-generated feedback as immediate, accessible, interactive, and useful for revision [6].

However, feedback availability and feedback effectiveness are not identical.

The educational value of AI-generated comments depends on how learners interpret and use them.

An important pedagogical distinction should be made between AI correction and AI feedback.

Consider the following request:

Rewrite this paragraph in perfect academic English.

The AI system may generate a substantially improved paragraph. However, the student may not understand:

what was problematic in the original version;

which changes were necessary;

why specific expressions were replaced;

whether the meaning has changed;

how to apply the same principles independently.

By contrast, the student might use the following request:

Analyze this paragraph but do not rewrite it. Identify the two most important problems affecting clarity and academic style. Explain each problem and ask me to revise the sentences myself.

The second interaction preserves a greater degree of learner agency.

The distinction can therefore be summarized as follows:

Correction asks AI to improve the text. Feedback asks AI to help the student improve the text.

For the development of self-regulated writers, the second function is generally more educationally valuable.

Generative AI can be integrated into academic writing through a cyclical process consisting of several stages.

Stage 1. Goal Setting

Before requesting feedback, students should identify what they are trying to improve.

A vague request such as:

Check my essay.

provides little evidence of self-regulation.

A more strategic learner might identify a specific goal:

I want to improve the logical connection between my thesis statement and the topic sentences of my body paragraphs.

or:

I want to reduce unnecessary repetition without making my writing less clear.

Goal setting directs attention and prevents students from becoming overwhelmed by large quantities of AI-generated feedback.

Stage 2. Targeted Feedback Seeking

Students then formulate a request corresponding to the goal.

For example:

Read my introduction as an academic writing tutor. Do not rewrite it. Evaluate whether the research problem, context, and purpose of the paper are logically connected. Identify any missing connection and explain it.

Such a prompt encourages diagnostic rather than substitutive use of AI.

Feedback seeking itself is an important self-regulatory behaviour because learners identify what assistance they need instead of waiting passively for a teacher to identify every problem.

Recent research on LLM-supported EFL instruction has

identified self-initiated feedback seeking as one of the behaviours associated with AI-supported self-regulated writing [8].

Stage 3. Feedback Evaluation

This is perhaps the most important stage.

AI feedback should not automatically become a revision instruction.

Recent research into L2 writers' engagement with ChatGPT feedback shows that students do not respond identically to all forms of feedback. Engagement can involve acceptance, rejection, partial incorporation, or failure to revise, and responses may vary across language, content, and organizational feedback [7].

Therefore, the ability to evaluate feedback is a central component of self-regulated revision.

Stage 4. Revision Decision

After evaluation, students decide what action to take.

A useful framework includes four possible decisions:

Accept – the feedback is appropriate and the student understands why the change is needed.

Modify – the feedback identifies a legitimate problem, but the student chooses a different solution.

Reject – the student decides that the recommendation is unnecessary or inappropriate and can explain why.

Investigate – the student is uncertain and seeks additional evidence, teacher guidance, peer feedback, or further explanation.

This stage prevents AI from becoming an unquestioned authority.

Stage 5. Independent Revision

Whenever possible, the student should implement the revision rather than ask AI to replace the original passage.

For instance, after being told that the relationship between two ideas is unclear, the student should attempt to construct the logical connection.

AI can then be asked to evaluate the revised version:

I revised the paragraph myself based on your earlier feedback. Is the logical relationship clearer now? Explain your answer without rewriting it.

The process becomes dialogic and iterative.

Stage 6. Monitoring

Students compare the original and revised versions.

They consider whether the change:

solves the original problem;

improves clarity;

preserves intended meaning;

creates another problem;

makes the paragraph more coherent;

improves the text as a whole.

Monitoring prevents revision from becoming a collection of isolated sentence-level corrections.

Stage 7. Reflection

After revision, students identify what they have learned.

They may ask themselves:

What type of problem appeared repeatedly?

Which AI feedback was most useful?

Which suggestions did I reject?

What could I identify independently next time?

What writing strategy should I transfer to my next assignment?

Reflection transforms one-time feedback into knowledge that can influence future writing.

Prompting is sometimes discussed primarily as a technical AI skill. In academic writing pedagogy, however, prompts can be viewed as evidence of metacognitive awareness.

Students who know precisely what feedback they require demonstrate awareness of their own writing process.

Compare:

Make my essay better.

with:

Evaluate whether each body paragraph has one clear controlling idea and whether that idea directly supports my thesis. Identify problematic paragraphs but do not rewrite them.

Self-regulation is closely related to learners' beliefs about their own ability to perform a task.

Students who repeatedly experience difficulty with academic writing may become reluctant to revise because revision highlights problems they are unsure how to solve.

Immediate AI feedback can potentially reduce this difficulty by making assistance available whenever students need it.

Research involving EFL learners has reported positive associations between AI-supported writing experiences and factors such as motivation, engagement, and writing self-efficacy [6].

However, increased confidence should be interpreted carefully.

Generative AI does not eliminate the need for teacher feedback.

On the contrary, the availability of unlimited machine-generated feedback makes teacher guidance increasingly important.

Research on ChatGPT-supported teacher feedback in tertiary EFL settings emphasizes the potential value of combining AI analysis with teacher judgement rather than treating the two sources as competitors [5].

Teachers can also help students move beyond surface correction by designing prompts, rubrics, and revision tasks that require attention to argumentation and organization.

The teacher's role therefore shifts partly from being the sole provider of feedback to being a teacher of feedback use.

This distinction is important.

A student surrounded by feedback is not necessarily a student who knows how to revise.

If educators want students to engage strategically with AI feedback, assessment practices should reward the revision process and not only the final polished text.

A final essay alone provides limited evidence of who made the important writing decisions.

Generative AI can produce large quantities of feedback within seconds. Less experienced EFL writers may struggle to decide which recommendations deserve priority. Recent research has identified feedback length, complexity, specificity, and misunderstanding as potential difficulties when EFL learners work with ChatGPT-generated comments [7].

More proficient students may be better equipped to recognize inappropriate AI recommendations. Lower-proficiency learners may accept inaccurate or stylistically unsuitable feedback

because they lack the linguistic knowledge needed to challenge it.

These problems demonstrate why AI-supported revision must be taught rather than merely permitted.

An effective classroom model can be organized into six phases.

Phase 1. Independent Drafting

Students produce the initial draft without asking AI to generate substantial sections of the paper.

Phase 2. Self-Assessment

Before requesting external feedback, students evaluate their own writing using a checklist or rubric.

They identify two or three priorities.

Phase 3. Targeted AI Feedback

Students request feedback specifically related to those priorities.

AI is instructed to explain rather than rewrite.

Phase 4. Critical Feedback Evaluation

Students classify recommendations as:

Accept – Modify – Reject – Investigate.

Phase 5. Independent Revision

Students make their own changes and document major decisions.

Phase 6. Reflection and Transfer

Students explain what they learned and identify one strategy to use independently in the next writing task.

The final stage returns the learner to the beginning of the cycle with greater awareness and potentially stronger independent writing strategies.

Results And Discussion

The integration of generative AI into EFL academic writing makes a distinction between better texts and better writers increasingly important.

Generative AI can often help produce a cleaner, more coherent, and linguistically sophisticated text. However, the primary educational objective of a university writing course is not simply to improve documents. It is to develop writers who can independently plan, evaluate, revise, and communicate academic ideas.

Self-regulated revision provides a framework for maintaining this educational priority.

From this perspective, the most valuable feature of generative AI is not that it can correct writing immediately. Its greater pedagogical potential lies in its ability to create an accessible and interactive feedback environment in which learners can ask questions, test revisions, request explanations, and receive repeated responses.

Research increasingly supports this interpretation. Studies have found positive effects or perceptions associated with AI-supported formative feedback, writing engagement, self-efficacy, and revision [4; 6]. At the same time, analyses of actual revision behaviour reveal that students' engagement with AI feedback is selective and complex rather than automatic [7]. Recent research directly connecting large language models with writing strategies for self-regulated learning also suggests that AI-supported instruction can encourage feedback seeking and critical feedback engagement when its use is pedagogically structured [8].

Generative artificial intelligence has expanded the possibilities for providing immediate, individualized, and interactive feedback in EFL academic writing. Students can receive support related to grammar, vocabulary, organization, argumentation,

coherence, and academic style at virtually any stage of the writing process. However, the availability of feedback does not automatically produce effective revision or independent writers.

Conclusion

Self-regulated revision requires students to establish goals, seek appropriate feedback, evaluate recommendations critically, make independent revision decisions, monitor the consequences of their changes, and reflect on what can be transferred to future writing.

Generative AI can support each of these processes, but it can also weaken them when students delegate the entire revision process to the technology.

For this reason, teachers should design AI-assisted writing activities that limit automatic rewriting and increase learner decision-making. Feedback logs, revision rationales, source comparison, accept-modify-reject activities, targeted prompting, error trackers, self-assessment, and reflective writing can transform AI feedback from an automatic correction service into a resource for learning.

The most productive model is therefore not one in which AI regulates the student's writing. It is one in which the student learns to regulate the use of AI while regulating the development of their own text.

In this way, generative AI feedback can contribute not merely to more polished academic papers but to the development of more autonomous, reflective, critical, and self-regulated EFL academic writers.

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