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Ginger writer feedback in English writing assessment: Association with motivation and self-confidence among Indonesian secondary students

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ABSTRACT

Limited evidence exists on how platform-specific AI feedback functions in secondary EFL writing assessment—especially regarding its connections to learners' motivation and self-confidence. This mixed-methods study used a one-group pre–post design with 35 Indonesian secondary EFL students during regular classes, integrating Ginger Writer. Motivation items were adapted from Schmidt & Watanabe, and self-confidence items from Bandura; both scales used 5-point Likert responses and showed good internal consistency. Semi-structured interviews, focus group discussions, and non-participant observations explored students' experiences with AI feedback during drafting and revision. Quantitatively, motivation increased significantly (pre: M=20.9, post: M=22.1; $t(34)=-2.32$, $p=.026$, Cohen's $d_{(z)}\approx0.39$), while self-confidence rose modestly but not significantly (pre: M=20.7, post: M=21.5; $t(34)=-1.80$, $p=.081$, $d_{(z)}\approx0.30$). Qualitative data showed students describing immediate, non-judgmental feedback that supported iterative revision, error noticing, and sustained effort, along with limitations such as connectivity issues and the need for teacher mediation to interpret suggestions. Triangulation suggests that quick, actionable feedback is linked to increased motivation during revision cycles, whereas confidence may require more extended exposure and scaffolding. The study indicates that schools can feasibly incorporate platform-specific AI feedback into formative writing assessment when combined with teacher guidance and reliable access; policy should support teacher professional development and infrastructure to enable equitable implementation.

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INTRODUCTION

The use of technology in education, especially in English teaching, is quickly growing in today's digital age and applies to both classroom and independent learning through digital platforms (Sahnan, 2024). One recent innovation is the use of artificial intelligence–based digital feedback in assessment. This method is believed to boost students' motivation to learn and their self-confidence. Both are essential in foreign language learning and remain challenging for many junior high school students in Indonesia, particularly during written tests. Research has found that many students at this level feel worried, less competent, and very unmotivated when they have to take English tests or writing exams (Yuliarsih, Amalia, Wahyuli, & Tamami, 2024).

Recent advancements in artificial intelligence provide one possible solution to these problems, particularly through AI-based digital feedback in writing assessment. AI tools can give fast and simple feedback that points out errors and suggests improvements based on students' actual writing. This kind of support may help students feel more confident and more willing to keep trying, which is important for building intrinsic motivation (Hardiansyah, Harahap, & Vandika, 2024). In digital classrooms, technology-based feedback is now a common part of teaching and is often used to make learning activities more engaging (Haleem, Javaid, Qadri, & Suman, 2022). Studies also indicate that interactive AI platforms can encourage more positive attitudes toward learning and support assessment practices that students experience as clearer and more useful for improving their work (Nurhayati, Suliyem, Hanafi, & Susanto, 2024).

Many secondary EFL learners in Indonesia report low confidence and fragile motivation when writing in English, especially under assessment conditions. Classroom use of platform-specific AI feedback tools (e.g., Ginger Writer) has been suggested to address these issues by offering immediate, easy-to-understand suggestions during drafting and revision. While international research increasingly explores AI-mediated feedback in higher education writing settings, there is limited and inconsistent evidence regarding its effects in secondary EFL classrooms in Indonesia, particularly on affective outcomes such as motivation and self-confidence during routine assessments (Escalante, Pack, & Barrett, 2023; Ummah et al., 2024). This pattern is consistent with the feedback literature in which task/process-level information supports improvement most directly when learners can act on it promptly and understand why a change is warranted (Hattie & Timperley,

2007), and with L2-writing scholarship that highlights the contextual, dialogic, and affective nature of feedback, including the role of teacher stance and mitigation in sustaining uptake (Hyland & Hyland, 2019).

Self-Determination Theory (SDT) proposes that timely and clear feedback can strengthen students' sense of competence and help them stay engaged in learning. Self-efficacy theory posits that when students successfully use feedback, they are more likely to trust their abilities and persist. In assessment, platform-based feedback that is rapid, specific, and nonjudgmental can support short cycles of drafting and revising, making students' progress more visible. This visible progress can support motivation and, over time, build confidence through repeated successful experiences (Bandura, 1997; Ryan & Deci, 2014). Research on L2 motivation also shows that what happens in the classroom shapes students' moment-to-moment decision to invest effort (Dörnyei, 1998). When these ideas are combined, they point to a similar conclusion: clear and immediate feedback may help students remain engaged with the task during short revision cycles, whereas stronger confidence is likely to develop more slowly through many credible mastery experiences across different tasks.

In classroom assessment, previous studies report that AI-generated feedback can help students notice their errors, make their messages clearer, and revise their English writing step by step (Escalante et al., 2023). School-based reports also underline that several conditions affect how useful this feedback can be, including internet access, the need for teacher help in interpreting suggestions, and chances for students to discuss the feedback with peers (Haleem et al., 2022; Nurhayati et al., 2024). Rather than repeating broad claims about efficiency, the present study examines more closely how feedback was used in class: whether rapid feedback reduced waiting time, how students understood and applied the suggestions, and which classroom routines appeared to support effective revision. With this background, the study examines how Ginger Writer was integrated into secondary EFL writing assessment and how its use related to two emotional outcomes, students' motivation and self-confidence, during regular lessons, using pre- and post-surveys supported by qualitative data.

Based on this focus, the study addresses three research questions: (1) How was Ginger Writer used during classroom writing assessments in routine lessons? (2) To what extent do pre–post survey scores show within-group change in students' motivation and self-confidence? and (3) How do students describe their experiences with the feedback during drafting and revision? By combining survey results with interviews, focus group discussions, and non-participant observations, the study aims to provide a contextualised picture of classroom assessment that accounts for both emotional and cognitive aspects.

METHOD

Research Design

This study used a mixed-methods approach. Following an explanatory sequential design, the quantitative study, with the first phase conducted first, used a one-group pre–post survey to examine within-group change in students' motivation and self-confidence. Because there was no control group, the design does not permit causal conclusions; therefore, the quantitative findings are treated as within-group changes or associations rather than as clear effects. The qualitative strand includes interviews, focus groups, and observations. It adopted a qualitative descriptive orientation and employed thematic analysis of interviews, focus groups, and observational data to support and explain these patterns in the classroom context.

Integration was pursued by aligning qualitative prompts with initial quantitative trends and jointly interpreting both strands to construct a coherent account. The combination of numerical data and contextualised insights was expected to offer a more comprehensive understanding of the research focus and to enhance the explanatory strength of the findings beyond what either method could provide alone (Cohen, Manion, & Morrison, 2018; Creswell & Clark, 2018; Zulaiha & Mulyono, 2020).

Participants

Participants were thirty-five eighth-grade students from a public secondary school in Indonesia. Students were drawn from a single intact class (N = 35) to preserve an authentic classroom environment during implementation. There were four parallel classes; the class selected for feasibility within the school timetable was included; the other classes were excluded. All students provided written consent. Participation was voluntary, and students could withdraw at any time without penalty. Identifiers were removed from datasets, and pseudonyms were used in reports. This intact-class, convenience sampling limits representativeness; therefore, findings are context-specific and not generalisable to all Indonesian secondary EFL learners. A brief reflexivity note is warranted: the teacher-researcher role was acknowledged to students; surveys were anonymous and explicitly unrelated to grades; and observations were unobtrusive to mitigate role-related bias.

Instruments

The study drew on four data sources: pre- and post-surveys, semi-structured interviews, a focus-group discussion (FGD), and non-participant classroom observations. For construct mapping, the writing motivation survey was adapted from Schmidt & Watanabe's (2001) framework. It comprised six items coded M1 to M6 on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The items captured willingness to engage in writing tasks, enjoyment of writing in English, and perceptions of the usefulness of AI digital feedback as a learning assistant. Prior research supports the role of AI in enhancing writing abilities and motivation in EFL contexts (Mohammed & Khalid, 2025; Rad, Alipour, & Jafarpour, 2023). The self-confidence survey was adapted from Bandura (1997). It included six statements, coded PD1-PD6, and used the same five-point scale. The items assessed confidence in generating ideas, composing texts, and responding to feedback from the AI system. All statements were reviewed to ensure alignment with the targeted constructs: task engagement and enjoyment, and confidence in composing and in receiving feedback. A separate pilot study was not conducted due to timetable constraints; this omission is acknowledged as a limitation and is proposed as a direction for future refinement of the instrument. Within this design, the motivation items are interpreted as indexing task-focused willingness to invest effort during writing (Dörnyei, 1998), while the interview and FGD prompts were intended to elicit task- and process-level experiences of feedback (Hattie & Timperley, 2007)

To elaborate on students' experiences and classroom conditions, semi-structured interviews and a focus-group discussion were conducted, and later analysed thematically (Zulaiha & Mulyono, 2020). The questions asked students to describe perceived benefits and difficulties and to explain how AI-generated feedback related to their motivation and confidence. In parallel, non-participant classroom observations documented participation, enthusiasm, and visible affect during students' interactions with the system. Field notes captured emotional reactions and nonverbal behaviours that might not be fully represented in survey or interview responses.

Intervention Procedures

The intervention used Ginger Writer in students' regular English writing tasks, with a focus on classroom drafting and revision of recount texts, aligned with routine assessment. At the beginning, students completed a short writing task and a pre-survey to map common writing difficulties and record baseline motivation and self-confidence. In subsequent lessons, the teacher–researcher provided brief input on vocabulary, grammar, verb tenses, and simple writing strategies to support task completion. Students drafted texts and received instant feedback from Ginger Writer (e.g., spelling and grammar

suggestions). They were guided to interpret suggestions so that revisions reflected their own language choices.

Each lesson followed a draft–feedback–revise cycle: a brief introduction to the target feature, a first draft, instant AI feedback, a short discussion of the feedback, and a second draft. The intervention was scheduled for five 80-minute classes within the usual timetable. The post-survey was administered after the final session under conditions comparable to the pre-survey. Interviews and focus group discussions were conducted after the intervention to elaborate on survey patterns, and observations were carried out during sessions to triangulate engagement and uptake.

Data Analysis Procedures

Descriptive and inferential statistics were applied to the survey data. Cronbach's alpha was calculated to examine internal consistency and to provide an estimate of the reliability of the scales. Pre- and post-intervention scores for motivation and self-confidence were compared using paired-samples t tests. Formal tests of normality were not conducted; instead, the analyses relied on the robustness of the paired-samples t-test for composite Likert-scale scores at this sample size. This analytical choice is acknowledged as a limitation.

Qualitative data from interviews and focus group discussions were analysed thematically and subsequently integrated with the quantitative results to identify recurring themes and categories in students' experiences. In line with guidance on mixed-methods research, this integration was intended to yield a more comprehensive account of the role of AI-based digital feedback in English language assessment (Creswell & Clark, 2018; Zulaiha & Mulyono, 2020). This study drew on several data sources, including surveys, interviews, focus group discussions, and classroom observations, to examine where the findings were similar and where they differed. Because the classroom teacher also served as the researcher, several safeguards were implemented: survey responses were anonymous and unrelated to grades, classroom observations were kept low-key, and a brief analytic log was maintained to document critical decisions and enhance transparency.

FINDINGS

Reliability Test

The motivation and self-confidence items formed a reliable scale. In the pre-survey, Cronbach's alpha was 0.807 (M = 3.47, SD = 0.486), indicating good internal consistency. In the post-survey, alpha was almost the same (0.808), while the mean increased to 3.64 and the standard deviation decreased to 0.429. These results suggest that students' average ratings and the scale itself performed similarly and stably at both time points.

Overall, the results indicate that the instrument was suitable for measuring secondary students' motivation and self-confidence when learning English with AI digital feedback. Reliability was high both before and after the intervention. The increase in average scores from pre- to post-test suggests a within-group improvement during classroom use. Therefore, the instrument was not only internally reliable but also sensitive enough to detect changes in students' self-confidence and motivation.

Table 1. Reliability Analysis of Pre-Survey and Post-Survey Instruments

Survey Type	Mean	SD	Cronbach's α
Pre-Survey	3.47	0.486	0.807
Post-Survey	3.64	0.429	0.808

Quantitative Finding

This study investigated pre–post changes in motivation and self-confidence related to the classroom use of AI-based digital feedback. Data analysis used paired-samples t-tests on pre- and post-survey results for motivation (M) and self-confidence (PD). Descriptive statistics and test outcomes are summarized in Tables 2 and 3.

For motivation, the pre-survey mean was M = 20.9, SD = 3.61 (median = 21). The post-survey mean was M = 22.1, SD = 3.01 (median = 23). The mean difference was −1.171 (SE = 0.505). The paired-samples test showed a statistically significant change, $t(34) = -2.32$, $p = .026$. The corresponding effect size was Cohen's $d_{(z)} \approx 0.39$. The 95% confidence interval (CI) for the mean change was [+0.15, +2.20], indicating a small-to-moderate within-group improvement with reasonable precision. Figure 1 visualises pre–post means with 95% CIs to aid interpretation of magnitude and uncertainty.

For self-confidence, the pre-survey mean was M = 20.7, SD = 3.11 (median = 21). The post-survey mean was M = 21.5, SD = 2.88 (median = 22). The mean difference was −0.886 (SE = 0.493). The paired-samples test did not reach statistical significance, $t(34) = -1.80$, $p = .081$. The corresponding effect size was Cohen's $d_{(z)} \approx 0.30$. The 95% CI for the mean change was [−0.12, +1.89], which includes zero and is statistically consistent with minimal improvement or no reliable change over the study period. As noted in the Methods, formal normality tests were not performed; we relied on the robustness of the paired-samples t-test for composite Likert outcomes at this sample size and acknowledge this as a limitation.

Table 2. Paired Samples T-Test Results for Motivation (M) & Self-Confidence (PD)

Variable Pair	t	Df	p	Mean Difference	SE Difference
M_Pre – M_Post	–2.32	34	0.026	–1.171	0.505
PD_Pre – PD_Post	–1.80	34	0.081	–0.886	0.493

Table 3. Descriptive Statistics for Motivation (M) and Self-Confidence (PD)

Variable	N	Mean	Median	SD	SE
M_Pre	35	20.9	21	3.61	0.611
M_Post	35	22.1	23	3.01	0.508
PD_Pre	35	20.7	21	3.11	0.525
PD_Post	35	21.5	22	2.88	0.487

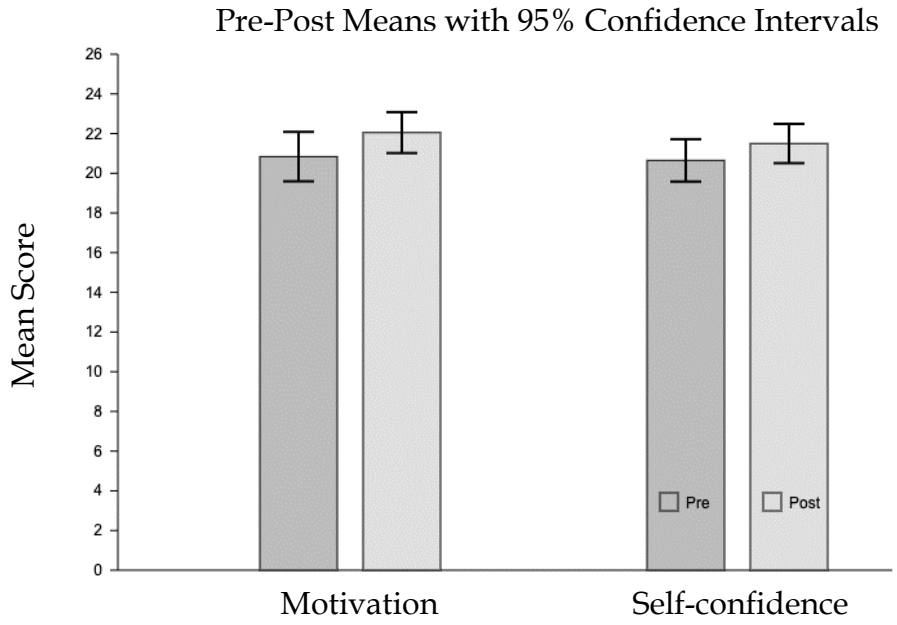

Figure 1. Pre–post means for motivation and self-confidence with 95% confidence intervals. Exact descriptive statistics and paired-samples t-test results are reported in Tables 2–3.

Qualitative Finding

Thematic analysis of interviews, focus groups, and observational data identified six themes characterising students' emotions, perspectives, and classroom experiences when using Ginger Writer during English writing

assessments. Analysis proceeded inductively (two-cycle coding); a subset from all three sources was independently double-coded, and disagreements were resolved by consensus, with decisions logged. Consistent with the explanatory sequential design, qualitative patterns elaborate mechanisms suggested by the survey results; brief quotations and observation notes are presented as coded evidence. The decision to report short, illustrative quotations and to attend to teacher/peer mediation follows L2-writing feedback accounts that treat feedback as dialogic and context-dependent (Hyland & Hyland, 2019).

Initial feelings before using AI

At the start of the study, many students showed anxiety, hesitation, and low confidence when asked to write in English. Quiet tones and shy laughter signalled discomfort and uncertainty. Typical remarks were "I was worried that all of my sentences were incorrect and I did not know how to correct them," and "I was not confident when I wrote in English because I made so many mistakes." A focus group participant added, "At first I was nervous, I did not know if I could write well in English," while laughing nervously. These observations indicate low self-confidence at the beginning of the intervention. Students also described anxiety, confusion, and fear of making mistakes before knowing the AI feedback. Examples included "I felt anxious and panicked when writing English before knowing Ginger Writer apps" and "At first, I was confused and afraid of making mistakes when writing English texts."

Experience using AI-based digital feedback

Most students found Ginger Writer user-friendly and helpful for spelling, grammar, and translation. Comments included "Ginger Writer is easy to understand, the grammar and translation features are very helpful," and "The grammar check and spelling are the most helpful because I often misspell words." As sessions progressed, students described how AI helped them recognise errors and improve clarity. One student noted with relief, "I could see my mistake quickly because the AI feedback told me where my grammar was wrong." Another said during a focus group, "It helps me correct the spelling and makes my sentences easier to understand." A further comment was "I like it because it shows me what to change, so I do not repeat the same mistakes."

Impact on learning motivation

Many students reported that the rapid corrections were enjoyable and gave them the motivation to write. They often smiled, laughed, and appeared excited when the feedback appeared on the screen. One student said, "I was

more eager to write because I wanted to fix it straight away when I saw the feedback." In a focus group, several students laughed and agreed when a friend commented, "It is fun because I do not have to wait long for the teacher. I receive the feedback straight from the AI." Another student stated, "It inspired me to write again to see if I can do better this time." These comments show that quick feedback maintains students' attention and enthusiasm during writing tasks. Students also reported that AI-based digital feedback increased their motivation due to its speed and ease of use.

Some of their comments were, "I am more enthusiastic in writing because it is easier to get feedback from AI," and another student said, "I am motivated because it is like having a friend who can check my writing anytime." During group discussions, students gave similar comments, such as, "I am more enthusiastic because I get more help from these digital apps."

In simple terms, the quick and clear feedback made students believe they could improve their writing on their own. They responded to the comments immediately, which appeared to help them remain engaged and productive throughout the course. In the analysis, these comments were grouped under "immediacy leading to effortful revision" and help explain why students' motivation scores increased in the survey.

Impact on self-confidence

Students reported increased confidence in writing in English due to the use of AI-based feedback. When they wrote recount texts for exams, they felt more in control because it was easier to see and correct their mistakes. Common responses included: "I feel more confident after using Ginger Writer," and "I feel more confident because I know my mistakes are corrected straight away." During group interviews, several students also mentioned, "I feel quite confident writing English now."

Students reported feeling more comfortable writing in English over time, as reflected in class. As they read their work, some students smiled proudly, and their voices sounded more confident. One student explained, "I was not sure how to write the text before I knew about these feedback apps, but now that I have used them, I feel more confident to write in English." Another participant in a focus group commented, "I think I can write better now, not perfect, but more confident than before." A further comment was, "The more I used the feedback, the more I believed I could write on my own."

These comments suggest that repeated use of AI-based digital feedback strengthened students' confidence in their own writing. Confidence did not appear to come from one single task, but from many short cycles of drafting and revising. In the analysis, these data were grouped under the theme "emerging assurance," consistent with the small, non-significant

increase in self-confidence observed in the survey over the relatively short study period.

Collaborative learning and peer support

Students reported that discussing the AI feedback in groups was both useful and enjoyable. They often laughed and chatted while they compared suggestions and shared simple tips. One student said, "I also learned from my friend's mistakes when we discussed the AI feedback." Another explained, "In the group, we helped each other understand the feedback, and it made me feel better." Others mentioned, "My friend sometimes explained the feedback in a way that was easier to understand."

These comments show that working with classmates helped students' motivation and understanding. Listening to different ways in which friends explained the same feedback seemed to make the messages clearer and gave students greater confidence when revising. Notes from classroom observations (on-task talk and shared screens) and focus-group discussions told a similar story, supporting this idea of peer-supported interpretation of feedback.

Technical and practical challenges

Students not only provided positive feedback but also identified specific difficulties. The primary concerns were internet connectivity and the necessity for teacher assistance. One student said, "Sometimes the internet was slow, and I could not get the feedback immediately." Another person said, "I still needed the teacher's help to explain what the AI correction meant." In the analysis, these points were treated as practical limits on the tool's performance in class.

Taken together, the pre–post increase in motivation (within-group $d_{(z)} \approx 0.39$; 95% CI [+0.15, +2.20]) matches the qualitative findings that clear and immediate feedback helped shorten the feedback cycle and supported students' effort while drafting. In contrast, the small and statistically unclear change in self-confidence (within-group $d_{(z)} \approx 0.30$; 95% CI [−0.12, +1.89]) fits the theme of "emerging assurance," where students had started to feel more confident but were still unsure how to explain or justify their revisions. This pattern suggests that larger gains in self-confidence may need more time and stronger scaffolding.

DISCUSSION

This discussion looks at how Ginger Writer was used in secondary EFL writing assessment by reading the pre– and post–surveys together with data from interviews, focus-group discussions, and classroom observations. It is guided by the principles of competence support and self-efficacy, and

informed by a sociocultural view of classroom learning. Rather than simply repeating the results, the section explains how and under what conditions the tool seemed to work. The discussion is organised around the research questions: motivation (RQ1), self-confidence (RQ2), and students' experiences (RQ3), and then brings these strands together and notes the limits of the conclusions.

Motivation (RQ1)

A small to moderate increase in students' motivation was found. From a Self-Determination Theory perspective, the system's quick, clear suggestions can be interpreted as signals of competence that help students remain engaged during short cycles of drafting and revising (Ryan & Deci, 2014). Students' comments about shorter waiting time and easier error noticing point to a possible way in which the feedback supported continued effort. This result is consistent with earlier studies showing that AI-mediated feedback can help students identify errors and improve their writing step by step in EFL contexts (Escalante et al., 2023; Hajian, Chang, Wang, & Lin, 2025; Mohammed & Khalid, 2025; Rad et al., 2023). However, school-based reports also indicate that changes in motivation depend on conditions such as internet access and teacher support; when connectivity is weak or guidance is limited, emotional benefits may be smaller or slower to emerge (Haleem et al., 2022; Nurhayati et al., 2024). In this study, Ginger Writer was used in regular lessons with teacher guidance and peer interaction, which appears to have created a setting in which immediate feedback was understood as useful information for learning, not merely as correction. Interpreted in this way, prompt and comprehensible task- or process-level cues are likely to be read as "doable next steps," aligning with classroom-situated investment of effort highlighted in L2 motivation research (Dörnyei, 1998) and with widely reported effects of high-utility feedback (Hattie & Timperley, 2007).

Self-Confidence (RQ2)

Self-confidence exhibited only a small, statistically inconclusive pre–post change. This pattern is consistent with Bandura's account that stronger efficacy beliefs tend to develop after repeated mastery experiences and credible self-attribution across tasks (Bandura, 1997; Im et al., 2025; Ritonga, 2024). Qualitative evidence indicated emerging assurance, accompanied by continued uncertainty about how to justify revisions, suggesting an initial shift rather than a fully consolidated change.

Cautionary evidence in local contexts notes limited or slow affective movement when learners treat AI output as authoritative edits or when connectivity constrains opportunities to experience mastery (Nurhayati et al.,

2024; Ummah et al., 2024), which helps to explain the modest short-term change observed here.

Student Experiences During Assessment (RQ3)

Students valued immediate, comprehensible suggestions and often collaborated to interpret them, while teacher mediation remained important for aligning edits with personal language choices. Such dialogic mediation is consistent with L2-writing feedback research, which emphasises interactional framing and affective stance as conditions for productive uptake (Hyland & Hyland, 2019). These features align with a sociocultural view in which tools become educationally useful when appropriated through interaction and guided explanation rather than applied as decontextualised corrections (Vygotsky, 1978; Zulaiha & Mulyono, 2020).

Observations of on-task talk and visible enjoyment corroborated these accounts, whereas intermittent connectivity and occasional uncertainty about rationales for change marked salient boundary conditions (Da Costa, De Almeida Fonseca Rosa, & Diogo, 2024; Kusumaningtyas, 2025; Rossetti, 2024).

Taken together, the strands converge on engagement processes and diverge on efficacy trajectories. The increase in motivation aligns with students' descriptions of shorter feedback loops that reduced waiting time and encouraged effortful revision. The limited movement in self-confidence aligns with "emerging assurance," coupled with uncertainty about how to justify revisions, indicating that efficacy trajectories likely require longer exposure and structured opportunities to attribute improvement to one's own decisions. Observed constraints, i.e., connectivity and reliance on mediation, offer a contextual explanation for why motivational change was noticeable while confidence gains remained tentative (Haleem et al., 2022; Nurhayati et al., 2024; Ummah et al., 2024).

CONCLUSION

This study documented the classroom use of Ginger Writer during routine secondary EFL writing assessments and observed a small-to-moderate within-group increase in motivation, alongside a modest, statistically inconclusive pre–post change in self-confidence. Students described immediate, comprehensible suggestions that supported short cycles of drafting and revision, while intermittent connectivity and the need for guidance remained salient conditions of use.

In theoretical terms, the pattern observed here coheres with classroom-situated L2 motivation (Dörnyei, 1998), high-utility task/process feedback (Hattie & Timperley, 2007), and dialogic L2-writing feedback that depends on mediation and stance (Hyland & Hyland, 2019). Interpreted through established theory, the pattern is clear: immediacy and clarity of feedback are

plausibly regarded as cues of competence that support ongoing engagement in short revision cycles (Ryan & Deci, 2014), while stronger self-efficacy generally results from repeated mastery experiences and credible self-attributions over longer periods (Bandura, 1997). A sociocultural perspective helps explain classroom adoption: suggestions functioned as resources only when interpreted through mediation and peer discussion, rather than as decontextualized corrections (Vygotsky, 1978; Zulaiha & Mulyono, 2020). These interpretations also align with school-level cautions that benefits vary based on access and available guidance (Haleem et al., 2022; Nurhayati et al., 2024).

In practical terms, platform-based AI feedback can be used as a formative tool in regular lessons when several conditions are met. First, short draft–feedback–revise cycles are needed so that students do not wait too long for comments. Second, brief explanations, such as "why this change?", can help shift attention from merely correcting errors to understanding them. Third, teachers need to give clear guidance and show how to read and evaluate the suggestions while still keeping the students' own voices in the text. Fourth, peer explanations can help students make sense of the feedback together. Finally, simple backup routines are useful for maintaining activity when the internet connection is weak. For developers, clearer on-screen explanations and more stable system performance would make it easier for teachers to use the tool in class. For schools, professional development that helps teachers understand AI feedback and plan revision activities is recommended.

The design of this study also has limitations. The one-group pre–post survey involved only one intact class (N = 35), relied on short-term self-report measures, and did not include formal tests of normality. These factors limit the extent to which the findings can be generalised; therefore, the results are interpreted as indications of patterns within this group rather than as strong causal evidence. Accordingly, the findings are interpreted as within-group associations rather than as evidence of causal effects. Future research should use comparative designs across multiple sites, extend exposure to assess the durability of motivational change and the trajectory of confidence, incorporate performance-based indicators and classroom artifacts alongside surveys, and model the moderating roles of mediation and access (Cohen et al., 2018; Creswell & Clark, 2018; Haleem et al., 2022; Im et al., 2025; Nurhayati et al., 2024). Overall, the evidence suggests that—under typical lesson conditions and with mediation—platform-specific AI feedback is associated with short-term motivational engagement, whereas developing confidence likely requires longer, structured opportunities for students to enact and justify their own revisions.

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