

The Impact of Teacher-generated Emergent Feedback on EFL Learners' Feedback Literacy and Perception

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ABSTRACT

Objective: This study investigated the effects of teacher-generated emergent feedback on the writing feedback literacy of Iranian EFL learners with high and low writing self-efficacy.

Methods: This mixed-methods study involved 60 upper-intermediate EFL learners from two branches of Islamic Azad University. Based on their writing self-efficacy scores, participants were divided equally into a high self-efficacy group ($n = 30$) and a low self-efficacy group ($n = 30$). Both groups completed a 15-session IELTS writing course in which they received teacher-generated emergent feedback. Writing feedback literacy was measured before and after the treatment using the writing feedback literacy scale. Quantitative data were analyzed using descriptive statistics, assumption testing, mixed ANOVA, paired-samples t-tests, and change-score analyses. Qualitative data were analyzed using reflexive thematic analysis.

Results: The quantitative findings showed a significant time-by-self-efficacy interaction, indicating that learners' progress in writing feedback literacy differed according to their self-efficacy levels. Learners with high self-efficacy made significant gains, whereas those with low self-efficacy did not. The qualitative findings showed that high self-efficacy learners engaged in dialogic interaction with the teacher by perceiving teacher comments as dialogic guidance, transforming them into self-regulatory strategies, and treating critique of their writing as part of the learning process. In contrast, low self-efficacy learners relied heavily on teacher authority, defensively sought explicit reassurance, and found it difficult to transfer feedback into autonomous learning strategies.

Conclusions: Teacher-generated emergent feedback appears to promote writing feedback literacy more effectively among learners with high writing self-efficacy than among those with low self-efficacy. Writing teachers should therefore consider learners' self-efficacy beliefs when providing feedback, and low self-efficacy learners may need additional scaffolding, such as explicit feedback training, confidence-building support, and gradual guidance toward autonomy, to benefit fully from dialogic feedback practices.

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Introduction

As an essential language skill, writing is a key component in effective interaction particularly in academic contexts (Azkarai & Calzada, 2024). To achieve that efficiency, language learners are expected to progress to higher levels of writing proficiency (Tariq, 2024); a task which can be cognitively demanding and challenging for EFL learners and their teachers (Safari & Ahmadi, 2024; Zhang & Yu, 2024). A widely discussed technique for helping learners better develop their writing skill is providing relevant corrective feedback (Guo & Wang, 2024; Mai, 2026; Maslucha et al., 2024). Of various realizations of corrective feedback, the one which is offered in a gradual manner (i.e., emergent feedback) is believed to be more productive for promoting self-paced learning.

Emergent feedback involves providing graduated assistance that starts with the most implicit hints and ends up in explicit corrections (Aljaafreh & Lantolf, 1994) to help learners become more self-regulated in writing. Building on the concept of adaptive scaffolding in sociocultural theory (Vygotsky, 1976; Zarei et al., 2018), it is suggested that emergent assistance enhances the internalization process, making it possible for the learners to eventually self-regulate their own learning (Zarei et al., 2020). However, without learners' understanding of such feedback on their writing (i.e., writing feedback literacy), emergent feedback cannot yield its full potential. In other words, to develop this multi-dimensional capacity, learners need to engage meaningfully with feedback (Han & Xu, 2021; Zhan, 2022) and reflect on it to enhance their writing (Zhang et al., 2023).

Writing feedback literacy is defined as learners' ability to appreciate, assess, and use L2 writing feedback while controlling the relevant emotions. Learners who have a high level of feedback literacy seek feedback proactively and use it to enhance performance (Sutton, 2012). As such literacy involves learners' active interpretation and application of feedback at multiple levels (Sutton, 2012), a question arises as to whether emergent feedback can foster such literacy. As Zhang et al. (2023) acknowledges, the possible impact of emergent feedback on writing feedback literacy is largely understudied in EFL writing research.

Additionally, little is known about the way emergent feedback shapes learners' behaviors and perceptions toward this mode of writing practice (Yu et al., 2023) or whether personal traits (e.g., writing self-efficacy) mediate the effects of emergent feedback interventions. While previous

studies (e.g., DeBusk-Lane et al., 2023; Shen & Bai, 2024) have reported positive impact of writing self-efficacy, or learners' confidence in their writing skill, grammar, and mechanics skills, empirical data on how it might mediate the effect of emergent feedback on learners' writing performance remains scant.

Shedding light on learners' perceptions of emergent feedback can yield important insights given that perceptions contribute to shaping engagement with and converting feedback into uptake (Han & Xu, 2021). To be effective, feedback should be deemed as useful and manageable by learners (Sutton, 2012). Based on social cognitive theory, self-efficacy impacts task selection, motivation, and persistence in challenging situations (Pajares & Valiante, 2001; Shaona, 2025). The studies conducted on writing self-efficacy show the contribution of such a type of self-efficacy to shaping learners' perceptions of writing tasks and their motivation (Shen et al., 2023; DeBusk-Lane et al., 2023).

To contribute to this research base, this study seeks to explore the possible impact of teacher-generated emergent feedback on writing feedback literacy of a group of upper-intermediate EFL learners across high and low self-efficacy levels. Moreover, it examines how highly self-efficacious learners and those at a lower level of self-efficacy perceive writing practice with teacher-generated emergent feedback. The findings can be insightful for writing course design in L2 contexts.

Literature Review

Emergent Feedback and Feedback Literacy

Grounded on Vygotsky's (1976) sociocultural theory, emergent feedback is a mediation initially delivered implicitly and gradually takes an explicit form based on the learners' ongoing responsiveness (Zarei et al., 2018, 2020). That is, graduated scaffolding which is provided on learners' written outputs starts from implicit cues and moves toward explicit guidance. The presentation of emergent feedback depends on the learner's immediate needs (Zarei et al., 2018, 2020); that is, such feedback is adaptive as it takes the learners' responses into account. Additionally, the quality of learners' responsiveness to feedback largely depends on their feedback literacy or ability to grasp, assess, and act on feedback while managing their emotional responses throughout the process (Carless & Boud, 2018; Sutton, 2012).

Feedback literacy reflects the key role learners should play in interpreting and using feedback information (Yu et al., 2022). As for within L2 writing, feedback literacy is operationalized as a multidimensional construct that consists of several capacities, including the ability to recognize feedback, acknowledge different sources, pass informed judgments, control affect, and act effectively based on received comments (Yu et al., 2022). Three components of knowing, being, and acting underlie these dimensions, which are fostered through repeated, effective engagement with feedback processes (Sutton, 2012).

As a dynamic trait, feedback literacy evolves over time through the implementation of instructional design and social interaction (Han & Xu, 2021; Molloy et al., 2020). The bulk of empirical studies on L2 have explored the contribution of feedback literacy to academic writing (Yu & Liu, 2021), disciplinary writing (Li & Han, 2022), and online learning-oriented evaluation (Ma et al., 2021). Although feedback literacy has been the focus of attention in higher education and L2 writing, no previous study has explored the potential contribution of specific feedback modalities, especially adaptive, teacher-driven approaches such as emergent feedback to enhancing feedback literacy among students with different personal traits (e.g., writing self-efficacy).

Writing Self-Efficacy and Engagement in L2 Writing Feedback

Writing self-efficacy is defined as learners' confidence in their abilities to successfully perform writing tasks. Research on learners' variables suggests that writing self-efficacy is a critical motivational construct that influences the extent to which learners make efforts and perform persistently when writing (Bandura, 1986; Pajares, 2003). Previous studies have indicated that highly self-efficacious writers are more likely to compose higher-quality texts, grapple with less writing anxiety, and use more self-regulatory strategies while writing (Hwang, 2025; Woodrow, 2011). These studies have also yielded evidence that writing self-efficacy contributes to shaping the way in which learners engage with feedback. More specifically, learners at higher levels of writing self-efficacy better embrace constructive feedback, perceive corrective comments as new opportunities for learning, and perform more resiliently in the face of challenges (Li, 2023; Zhou et al., 2022). In contrast, low self-efficacy learners may evade feedback, provide defensive responses, or fall short of benefitting from the guidance they receive (Ruegg, 2018). The studies conducted by Bandura (1986) and Mitchell et al. (2019) have revealed the moderating effect of self-efficacy on how feedback processes impact performance in educational contexts; however, no

studies have examined the potential interplay of self-efficacy and specific feedback types in influencing L2 writing.

Since learners' self-confident and belief in their capacity to make progress is a prerequisite for valuing, engaging with, and acting on feedback, it can be claimed that feedback literacy is closely related to self-efficacy (Carless & Boud, 2018; Sutton, 2012). In other words, feedback literacy or learners' ability to regulate the emotional responses to feedback, make evaluative judgments about feedback, and use feedback to improve performance (Yu et al., 2022), is contingent on their self-efficacy. This is because learners' self-perceptions impact their desire to deal with writing shortcomings and make revisions to the text (Bandura, 1986; Pajares, 2003).

A careful review of related research reveals that the combined contribution of feedback literacy and self-efficacy has not explored within a single, ecologically valid feedback intervention. Additionally, previous studies on emergent feedback have exclusively focused on oral interaction settings. Accordingly, the aim of this study is to explore the possible contribution of teacher-generated emergent feedback to improving feedback literacy among Iranian upper-intermediate EFL learners across high and low self-efficacy levels. More specifically, the study compares the highly self-efficacious learners with those of a lower level of this attribute in relation to writing. The following research questions were addressed:

RQ1: Does teacher-generated emergent feedback have any impact on Iranian upper-intermediate EFL learners' feedback literacy in relation to their self-efficacy level? (i.e. higher vs. lower).

RQ2: How do learners with high and low levels of self-efficacy perceive teacher-generated emergent feedback in relation to their writing feedback literacy?

Material and Methods

Research Setting and Context

This study was conducted in Islamic Azad University (IAU) which is comprised of about 500 campuses across Iran. The present study was done in Tehran and Karaj branches, two major campuses with affiliated educational institutions. The programs at these two branches are diverse in terms of the academic disciplines they pursue (e.g., engineering fields, humanities, management, and social sciences). The rationale for choosing these IAU branches has to do with the accessible, large-scale classrooms they offer, as well as an adequate sample of upper-intermediate level EFL

learners given that such a sample lends itself to quantitative and qualitative inquiry. The study was conducted at the academic year 2024–2025. As a result, it was possible for the researcher to overlap the research schedule with the regular academic program.

Participants

Eighty EFL learners were selected from a pool of 100 learners studying at the two branches of IAU following convenience sampling. The participants included both male and female EFL learners and were selected from among the available classes. Their age ranged between 20 to 24. At the initial stage, the researcher administered the Oxford Placement Test (OPT) to the selected participants. Only those learners whose scores fell within the range of 37–47 (upper-intermediate level) were included in the study ($N = 60$). Given that this study was about IELTS writing, we selected upper-intermediate participants (OPT 37–47), for the reason that this level is known to have already fostered many of the skills (coherent argumentation, lexical resource, and grammatical range and accuracy) needed to successfully perform on all the IELTS writing tasks. The first researcher participated in the study as the writing course instructor.

Instruments

Oxford Quick Placement Test (OQPT): OQPT, developed by Oxford University Press, consisting of 60 items was used to select a homogenized group of participants in terms of language proficiency. Learners' performance was assessed based on their scores displaying language proficiency levels from beginners to high advanced: 1–17 (Beginner), 18–27 (Elementary), 28–36 (Lower-Intermediate), 37–47 (Upper-intermediate), 48–55 (Advanced), and 56–60 (high advanced).

Writing Self-Efficacy Scale: Writing self-efficacy was measured by the writing self-efficacy scale developed and validated by Mitchell et al. (2021). The scale measures three constructs including: Writing-Essentials (i.e., synthesis, emotional control, and language), Relational-Reflective (i.e., relationship building with writing facilitators (teachers, academic sources) and the self through reflection) and Creative Identity (i.e., exploring gaps in student achievement of transformative writing (creativity, voice, and disciplinary identity)). The questionnaire is comprised of 16 items on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Learners' Writing Feedback Literacy Scale: Learners' writing feedback literacy was measured before and after the treatment via a five-point Likert scale consisting of 28 items developed and validated by Yu et al. (2022). The instrument measures five dimensions of feedback literacy including appreciating feedback (10 items), acknowledging different feedback sources (5 items), making judgments (5 items), managing affect (3 items), and taking action (5 items). Yu et al. (2022) have reported desirable psychometric properties for the instrument via utilizing exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and Cronbach's alpha indices. The survey following it confirmed successful pilot testing in terms of clarity and readability, and had an alpha value of 0.93 for internal consistency.

The Writing Course: The writing course comprised 15 sessions and sought to make the upper-intermediate EFL learners prepared for taking the IELTS Academic Writing Task 2, with each session lasting 90 minutes. This course placed emphasis on enhancing the main skills the participants needed to perform IELTS writing task successfully (e.g., critical thinking, argumentation, coherent writing, diversified vocabulary, and accurate grammar). As for the writing tasks, the study selected ten writing tasks from the bank of IELTS exams and writing materials, with a focus on ten main topics (e.g., why is education important, what is the role of technology in education, what are the main current environmental issues, and what are the social concerns). The books "the Effective Academic Writing" (Savage & Mayer, 2006) and "the IELTS Writing Answer Key" (Maximiser) (Memarzadeh, 2010) were taught during the course.

Semi-structured Interviews: Semi-structured interviews were used to collect data on how the participants perceived the effects of teacher-generated emergent feedback on their feedback literacy. The process of interview question development unfolded in several phases. Initially, a thorough review of the literature was done, which yielded the main concepts, categories, and relevant sub-categories associated with writing feedback literacy and writing self-efficacy. The resulting insights and evidence were used to develop a tentative set of interview questions. The finalized version of the interview guide was pilot tested on 5 upper-intermediate EFL learners with corresponding features similar to those of the target population. Each learner participated in the interview in an in-person mode and each interview session was conducted in Farsi and lasted for

about 30-40 minutes. Subject to the participants' consent, all the sessions were audio-recorded to ensure the completeness and accuracy of data.

Data Collection Procedures

Prior to the onset of the writing course, the selected participants ($N = 60$) were asked to complete the Writing Self Efficacy Scale. Given the distribution of total scores, two sub-groups were formed: the students with a high level of self-efficacy ($n = 30$) and those with a low level of self-efficacy ($n = 30$). Then, both groups filled a writing feedback literacy scale as pretest. This was followed by the administration of the treatment. The grouping and treatment types are displayed in Table 1.

Table 1. Grouping and Treatment Types

Groups	Number of Participants	Number of Classes	Treatment Type
High writing self-efficacy	30	Two classes of 15 members each	Teacher-delivered Emergent Feedback
Low writing self-efficacy	30	Two classes of 15 members each	Teacher-delivered Emergent Feedback

The duration of treatment was 15 sessions spread across 15 weeks and a total of five writing prompts were practiced. During the first session, a brief introduction of the course was provided. Then, the first writing assignment was given to the participants. The participant received two types of feedback each session and three sessions were allocated to each of the five writing tasks. In doing so, the learners completed their writing during the first session of each three-session cycle and submitted their drafts to the teacher. During this initial session, the teacher provided them with the feedback for the first stage and the learners were given the drafts to revise. The teacher then collected the drafts and provided the comments aligned with the second stage. Then, the teacher collected the drafts at the end of the first session and gave the feedback for the third stage at home. During the second session, the learners were given their drafts with the third-stage comments and corrected them. The learners then submitted the revised drafts to the teacher and were given the comments associated with the fourth stage. At the end of the second session, the teacher collected the drafts and commented on them based on the fifth stage of feedback. During the third session, the learners were given the commented drafts to revise. Then, the revised drafts were collected and

the teacher provided the final round of comments representing the sixth stage. The learners then applied the final changes.

The emergent feedback constituted moving from the most implicit feedback to the most explicit feedback in line with Aljaafreh and Lantolf's (1994) graduated mediation framework. In such framework, mediation sequences progressed from implicit to explicit scaffolding. The six feedback types were provided in an ascending order from the most implicit to the most explicit continuum (See Appendix for the feedback types). The main role of the instructor was the provision of feedback. The instructor collected learners' written products and read them line by line providing the designated staged feedbacks. The instructor then collected the corrected writings and proceeded with the feedback provision for the remaining errors. The learners, on the other hand, were required to study the instructor's comments and address those comments in their prospective corrected versions.

Following the administration of the treatment, the two groups completed the writing feedback literacy questionnaire as posttest. Additionally, 20 learners (10 participants from each group) were selected to take part in a semi-structured interview. Each interview session which took approximately thirty to forty minutes was audio-recorded with the participants' consent for subsequent transcription and analysis. Throughout the study process, all procedures adhered to ethical research guidelines. Participation in the research was voluntary, anonymity was assured through the use of pseudonyms, and data were used for the present research goals only.

Data Analysis

Quantitative and qualitative data were analyzed through integrated two-phase procedures. The quantitative procedures addressed the first research question which aimed to determine whether offering writing feedback literacy through teacher-generated emergent feedback had differential effects on learner writing feedback literacy along the self-efficacy dimension. Writing self-efficacy served as the grouping variable (two levels: high writing self-efficacy and low writing self-efficacy). Writing feedback literacy was assessed twice, prior to and after the treatment using pre- and post-treatment feedback literacy scale results. The pre-test feedback literacy score was labeled FL1 and the post-test feedback literacy score was labeled FL2.

Independent sample t-test was conducted on pre-tests. To make sure about the suitability of this approach, assumption checking was conducted. These included equality of the variance and

normality of distribution of the data. The equality of the variance at the onset of the study was checked using Levene's test. A p value more than .05 (i.e., $F(1, 58) = .03$, $p = .867$) that this assumption was met (Table 2). The Shapiro-Wilk test results also reflected that the data was normally distributed in the pretest (Table 3). Hence, independent sample t-test was convenient for pre-test data.

Table 2. Baseline Comparability of Pre-test Writing Feedback Literacy Scores

Comparison	Statistic	df	p	Effect size
Levene test for equality of variance	$F = 0.03$	1, 58	.867	—
Independent-samples t-test	$t = 0.45$	58	.655	d = 0.12

Note. The comparison was based on pre-test writing feedback literacy scores.

Table 3. Assumption Checks for Writing Feedback Literacy Scores

Variable	Self-efficacy level	Shapiro-Wilk W	p	Levene F	p
Pre-test feedback literacy	High self-efficacy	0.961	.322	0.028	.867
Pre-test feedback literacy	Low self-efficacy	0.957	.257	0.028	.867
Post-test feedback literacy	High self-efficacy	0.898	.008	17.240	< .001
Post-test feedback literacy	Low self-efficacy	0.969	.501	17.240	< .001

Note. Levene statistics are reported for between-group equality of variances at each measurement point.

The suitability of independent sample t-test was also checked for the post-test data. The assumption of the equality of variance ($F(1, 58) = 17.24$, $p < .001$) and normality of distribution (Table 3) were not met at the post-test. Hence, a mixed analysis of variance (ANOVA) with Time (pre- and post-test) as a repeated measure and Self Efficacy Group (high and low writing self-efficacy group) as the between-subject factor was conducted. Effect size was reported through partial eta squared for the effects of ANOVA. The results of the follow-up testing included paired-samples t-tests on pre- and post-test feedback literacy scores within self-efficacy groups and also independent-samples t-tests of change scores to determine if the magnitude of feedback literacy gain differed across self-efficacy groups.

Qualitative analysis procedures were employed to answer the second research question, which examined learners' perceptions of teacher-generated emergent feedback as related to their writing feedback literacy. Twenty participants from the high and low self-efficacy groups were interviewed, using semi-structured interview questions. All the semi-structured interviews obtained were transcribed and then analyzed via a reflexive thematic analysis (Braun & Clarke, 2006). Thematic analysis involves repeated reading of interview transcripts, initial coding, comparison of coding across high and low self-efficacy learners, generation of candidate themes,

identification and maintenance of themes, and rendition, defining and naming of themes, writing of a final report, and selecting data extracts to provide evidence for analysis (Braun & Clarke, 2006). The analysis of interview data informed the interpretation of the quantitative results and provided an explanation of why teacher-generated emergent feedback was more advantageous to some learners than to others.

Results

Research Question One

Descriptive statistics clearly indicated similar writing feedback literacy levels prior to the onset of the treatment for the high and low self-efficacy groups in the study (Table 4). Means for the high and low self-efficacy groups at the pre-test were 63.83 ($SD = 12.97$, $SE = 2.37$, 95% Confidence Interval [58.99, 68.68]) and 62.37 ($SD = 12.29$, $SE = 2.24$, 95% Confidence Interval [57.78, 66.95]) respectively. Means for the high and low self-efficacy groups at the post-test were 73.67 ($SD = 22.12$, $SE = 4.04$, 95% Confidence Interval [65.41, 81.93]) and 61.93 ($SD = 12.67$, $SE = 2.31$, 95% Confidence Interval [57.20, 66.66]) respectively, indicating that the high self-efficacy group increased in writing feedback literacy over time, unlike their low self-efficacy counterparts. The descriptive results suggest that whereas feedback literacy growth among high self-efficacy learners might be connected with teacher-generated emergent feedback, this relationship was absent among low self-efficacy learners.

Table 4. Descriptive Statistics for Writing Feedback Literacy by Self-efficacy Level and Time

Self-efficacy level	Time	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SE</i>	95% CI LL	95% CI UL
High self-efficacy	Pre-test	30	63.83	12.97	2.37	58.99	68.68
High self-efficacy	Post-test	30	73.67	22.12	4.04	65.41	81.93
Low self-efficacy	Pre-test	30	62.37	12.29	2.24	57.78	66.95
Low self-efficacy	Post-test	30	61.93	12.67	2.31	57.20	66.66

Note. FL1 = pre-test feedback literacy; FL2 = post-test feedback literacy; CI = confidence interval; LL = lower limit; UL = upper limit.

The homogeneity of the two groups regarding feedback literacy at the onset of the study was further checked using independent-sample t-test ($t(58) = .45$, $p = .655$, $d = .12$). Results from mixed ANOVA reveal no statistically significant main effect for time, $F(1, 58) = 3.51$, $p = .066$, $\eta^2p = .057$, although a near-significant larger feedback literacy gain for both groups pooled together was observed. Main effect for self-efficacy level was significant, $F(1, 58) = 4.42$, $p =$

.040, $\eta^2p = .071$, with learners high rather than low in writing self-efficacy documenting higher feedback literacy scores overall (Table 5). Time $\times$ self-efficacy level was also significant, $F(1, 58) = 4.19$, $p = .045$, $\eta^2p = .067$, indicating that learners' feedback literacy responses to teacher-generated emergent feedback were affected by their writing self-efficacy level.

Table 5. Mixed ANOVA Results for Writing Feedback Literacy

Effect	SS	df	MS	F	p	η^2p
Time	662.70	1	662.70	3.51	.066	.057
Time $\times$ Self-efficacy level	790.53	1	790.53	4.19	.045	.067
Self-efficacy level	1306.80	1	1306.80	4.42	.040	.071

Note. η^2p = partial eta squared.

Follow-up within-group comparisons indicated a significant within-group increase from pre- to post-test among high self-efficacy learners, $t(29) = 2.47$, $p = .020$, $dz = .45$, but not among low self-efficacy learners, $t(29) = -.14$, $p = .888$, $dz = -.03$. These results indicate that teacher-generated emergent feedback was associated with a meaningful increase in feedback literacy only among learners with high self-efficacy (Table 6).

Table 6. Within-group Pre–Post Comparisons for Writing Feedback Literacy

Self-efficacy level	n	Pre-test M	Post-test M	Mean difference	SE	95% CI LL	95% CI UL	df	t	p	dz
High self-efficacy	30	63.83	73.67	9.83	3.99	1.68	17.99	29	2.47	.020	0.45
Low self-efficacy	30	62.37	61.93	-0.43	3.05	-6.66	5.80	29	-0.14	.888	-0.03

Note. Mean difference refers to post-test minus pre-test. dz = standardized mean change for paired samples.

The difference in change scores across groups showed that learners high in self-efficacy experienced a gain of 10.27 higher than learners low in self-efficacy and that this difference was statistically significant, $t(58) = 2.05$, $p = .045$, 95% CI [0.22, 20.31], $d = .53$ (Table 7). A medium effect size highlighted the effects of writing self-efficacy as a factor mediating learners' reaction to teacher-generated emergent feedback.

Table 7. Between-group Comparison of Feedback Literacy Change Scores

Comparison	Mean difference in gain	SE	df	t	p	95% CI LL	95% CI UL	Cohen d
High SE gain minus low SE gain	10.27	5.02	58	2.05	.045	0.22	20.31	0.53

Note. Positive values indicate larger gain in the high self-efficacy group.

As shown in Figure 7, feedback literacy trails are observed in the pre- and post-test administration within the entire self-efficacy groups. While feedback literacy in the high self-efficacy group evidently increased across time in the present study, perceptions of feedback literacy fluctuated little in the low self-efficacy group. Such a figure illuminates the finding of mixed ANOVA in clearly showcasing that the use of teacher-generated emergent feedback did not result in similar levels of feedback literacy growth in the two groups. Feedback literacy development was perhaps limited largely to the high self-efficacy group in the current research project.

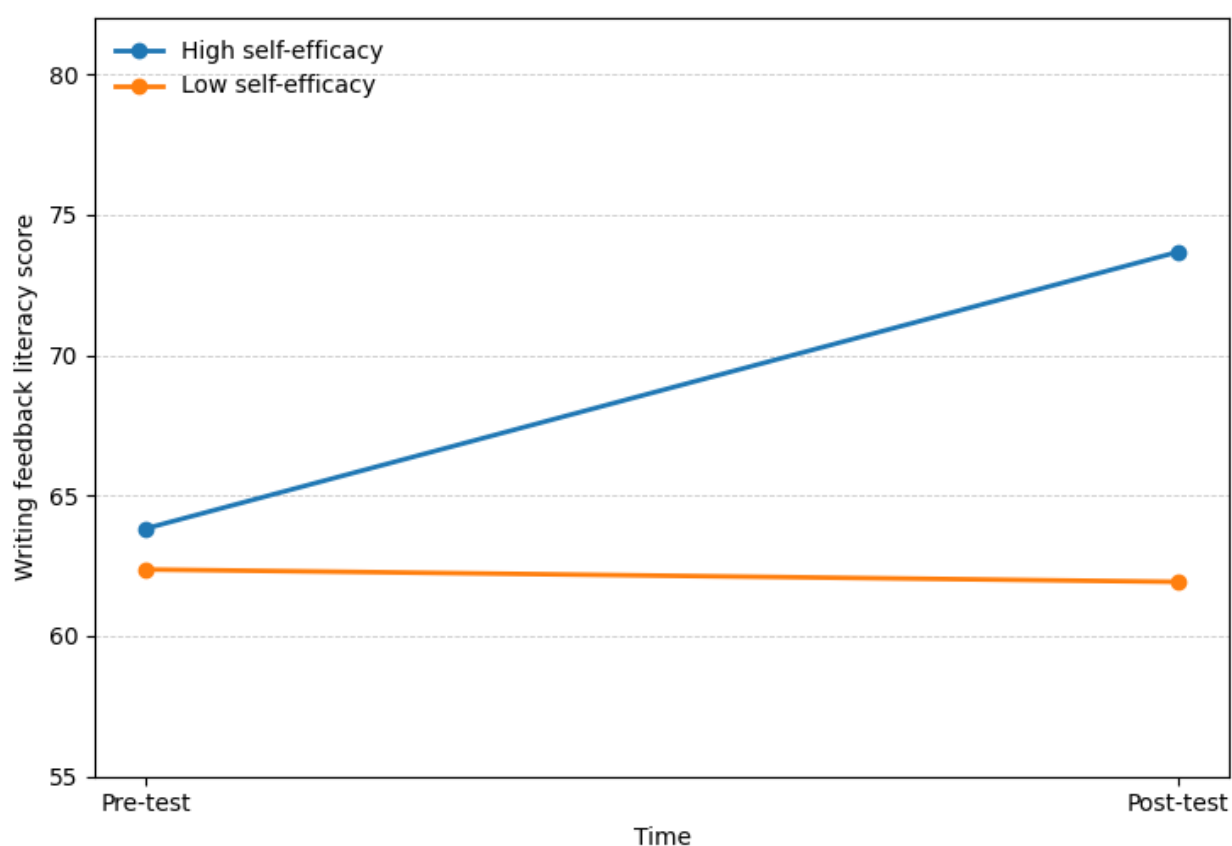


Figure 1. Writing Feedback Literacy Development by Self-Efficacy Level

Research Question Two

The perceptions of high and low self-efficacy learners toward the effect of teacher-generated emergent feedback on their feedback literacy were explored using qualitative data. The analysis of interview data yielded three interrelated themes as follows: 1) dialogic explanation as a means to understand feedback, 2) the independent use of feedback, and 3) the emotional self-regulation in

the face of teacher critique. Although both groups were exposed to the same type of feedback, the differential interpretation and use of teacher feedback by learners were remarkable. That is, the high self-efficacy learners saw teacher-created feedback as a dialogic resource that could enable them to develop judgment, engage in self-monitoring, and benefit from future revision strategies. In contrast, low self-efficacy learners tended to see feedback as an external judgment or as instructions they had to follow.

Dialogic Explanation as a Pathway to Feedback Understanding

The first theme had to do with the learners' evaluation of the explanatory and dialogic aspects of teacher-generated emergent feedback. The analysis revealed that highly self-efficacious learners found such feedback effective as it helped them identify errors and understand the reasons behind the revision. Indeed, the graduated shift from implicit feedback to explicit corrections gave this group of learners a chance to reflect on why a textual choice was not suitable. This process reinforced the judgment dimension of feedback literacy given that the learners managed to evaluate feedback, provide a rationale for their own writing choices, and extend feedback principles to new tasks:

Seeing my disagreement on modifying comma, the teacher asked me to explain my disagreement. We had a discussion, and finally I ended up learning how to justify the choices I had made. (TCHR-HSE-P3)

Some high self-efficacy learners acknowledged the efficacy of teacher-generated feedback for recognizing general writing principles, especially those associated with academic tone, argumentation, and evidence:

The teacher explained why my thesis statement was not upheld by the evidence and reasoning I had provided. This inspired me to make use of a more effective style as I could view writing from a new perspective. (TCHR-HSE-P4)

I had an intimate chat with my teacher, discussing why some words seem informal in academic writing. Afterwards, these teacher suggestions always guided me while embarking on writing. (TCHR-HSE-P5)

However, learners with low self-efficacy encountered difficulties in improving feedback usefulness and agency, and though they regarded the teacher as knowledgeable and kind, some

learners used teacher-generated suggestions as models for their own revisions and considered feedback as the correct answer, rather than the guide to direct their subsequent self-regulation:

My transition from one sentence to the next one was not accepted by the teacher. As a matter of fact, I only copied what she suggested so that I could not do it independently and had to wait for it to be corrected by the teacher. (TCHR-LSE-P3)

Ownership Versus Dependence in Feedback Use

Another theme extracted from the transcribed data related to the degree of learners' ownership over feedback use. The highly self-efficacious participants saw the emergent feedback provided by their teacher as a means through which they could build their personal revision routines. These learners tried to predict likely comments and apply previous feedback prior to the submission of their new drafts; that is, they did not wait for the teacher to correct every problem:

When I was informed of the writing tone of the essay by my teacher, I began drawing up a cognitive checklist to check my essays beforehand. Indeed, I would not wait for my teacher to provide comments because I could predict what he would say. (TCHR-HSE-P4)

In contrast, learners with a low level of self-efficacy often reported their dependence on teacher guidance. They sought teacher's comments and tips on formulas, examples, or exact alternatives as they were not confident enough to revise on their own. This dependence emerged as a barrier to the development of feedback literacy given that these learners tried to be compliant rather than be judged:

I wanted the teacher to provide me with a five-word list used for transition. I needed a formula given that I feared making mistakes. (TCHR-LSE-P3)

After submitting my assignment, I had to wait for the teacher's comment and grading. I assumed that receiving no comment on any section was indicative of the correctness. I am not confident that it is the case. (TCHR-LSE-P4)

Emotional Regulation in Response to Teacher Critique

The third theme related to the emotional aspect of feedback literacy. The data analysis revealed that highly self-efficacious learners found teacher-generated emergent feedback supportive though it sometimes had a critical tone. Learners with high self-efficacy envisaged revisions as an inevitable step to any growth in their English writing, thereby becoming more receptive to teacher feedback while trying to develop their writing confidence:

The warm words of the teacher regarding my resilience encouraged me to keep on trying. (TCHR-HSE-P4)

The teacher praised idea and told me: it would be better to improve it collaboratively. I was happy and excited, doing my best to keep on writing without fear. (TCHR-HSE-P2)

In contrast, the low self-efficacy learners experienced fragile emotions, with some describing teacher-generated feedback as evidence of their failure and inadequacy. This was the case even when the teacher used supportive language. These learners were obsessed with receiving approval, and they often relied on explicit praise to feel secured:

When the teacher did not respond with comments such as “Good start!” I thought it was terrible. Therefore, I started from the scratch to get that reassurance. (TCHR-LSE-P2)

When I heard the teacher say “let’s improve your conclusion” and focused on my mistake I had a bad feeling. (TCHR-LSE-P2)

The feedback created by the teacher contributed to improving feedback literacy providing that the learners were confident enough to engage with feedback dialogically, manage negative comments, and apply them to self-regulate their writing attempts. For highly self-efficacious learners, teacher-generated feedback was a resource for improving their judgment and ownership. On the contrary, low self-efficacy learners were often reliant on teacher authority, struggling to manage the emotional demands of the critique. As a result, the effect of teacher-generated emergent feedback on feedback literacy did not occur in a uniform manner; rather it was moderated by learners’ self-efficacy and their preparedness to use feedback as a developmental resource.

Discussion

This study explored the role of teacher-generated emergent feedback in writing feedback literacy enhancement of EFL learners across self-efficacy levels. The quantitative result revealed that teacher-generated emergent feedback can be an efficacious factor in sustaining writing feedback literacy but is not comprehensive for every learner type. The statistical analyses reflected no significant time effect when both groups were considered separately. However, the interactive effects of time by self-efficacy revealed the differential effect of the intervention across the two self-efficacy groups. That is, the highly self-efficacious learners demonstrated a significant gain

in feedback literacy from pre- to post-test; in contrast, low self-efficacy learners displayed almost no change.

This finding resonates with the broader conceptualization of self-efficacy as a motivational belief that influences learners' variables, including resilience, task engagement, and response to unexpected issues (Bandura, 1986; Pajares, 2003). We observed that high self-efficacy learners were not passive recipient of teacher feedback. Rather they benefited from it as a resource for enhancing their judgment, action, and self-regulation. The students with a low level of self-efficacy often had difficulty converting feedback into independent feedback-use practices.

The qualitative results further accounted for why the highly self-efficacious learners could benefit more from teacher-generated emergent feedback. High self-efficacy learners saw such feedback as interactive guidance rather than external correction, appreciating teacher comments. Hence, they participated in discussions on how to make effective revisions, using feedback to work out broader writing principles. Such a pattern is consistent with the current characterizations of feedback literacy, which places emphasis on the learners' capability of making judgments, managing affect, and taking action based on the feedback (Carless & Boud, 2018; Sutton, 2012; Yu et al., 2022). Indeed, the feedback created by the teacher emerged as a mediational process whereby the learners were able to gain more independent evaluative capacity.

Moreover, these findings contributed to increasing the sociocultural understandings of emergent feedback. Such type of feedback is underpinned by the concept of mediation, which emphasizes the determining role of teachers' responses in addressing learners' needs. In this context, feedback should move from implicit to explicit support as learners' skill evolve (Aljaafreh & Lantolf, 1994; Zarei et al., 2018, 2020). The results further indicate that such a mediation can enhance feedback literacy though the effect is highly contingent on learners' preparedness to engage actively in the mediational process. In contrast, learners with a low level of self-efficacy often sought direct answers, formulas, or reassurance from the teachers. Indeed, they found implicit or graduated feedback to be a source of uncertainty rather than a scaffold for independence.

Conclusion

The current study explored the influence of teacher-generated emergent feedback on Iranian upper-intermediate EFL learners' writing feedback literacy in the light of their self-efficacy levels. The findings of this study hold promise for pedagogical purposes. First and foremost, teacher-generated

emergent feedback should not be deemed an overarching effective strategy with similar outcomes for all learners. Indeed, L2 teachers should take into account learners' self-efficacy levels when designing and presenting graduated feedback. The highly self-efficacious learners may perceive open-ended prompts and dialogic questioning valuable, seeking opportunities to rationalize their revision choices. In contrast, the low self-efficacy learners should be provided with more explicit affective and strategic scaffolding before graduated mediation can be beneficial to them.

Moreover, the explicit instruction in feedback literacy should also be taken seriously. The finding reveals that the development of feedback literacy does not occur automatically just because learners receive feedback. Indeed, teachers need to guide learners on how to engage with and interpret comments, differentiate between local correction and transferable principles, demand clarification if the need arises, and make decisions as to how to revise. This finding is particularly essential for the students with a low level of self-efficacy, who may perceive feedback as evaluation or failure.

The results revealed that there was a significant increase in the writing feedback literacy of learners with a high self-efficacy level, however; there was almost no improvement for the low self-efficacy group. The qualitative section corroborated the quantitative findings in that the results of qualitative analysis revealed that high self-efficacy learners described teacher-generated feedback as a dialogic and developmental resource. In contrast, low self-efficacy learners often found teacher-generated emergent feedback as authoritative judgments or strict orders to follow. Accordingly, the development of feedback literacy moves beyond the mere exposure to feedback and should entail developing learners' confidence, emotional coordination, and evaluative judgment. These, in turn, require guided opportunities for self-directed action.

As for the pedagogical implications, this study implies that the teachers need to differentiate teacher-generated emergent feedback based on learners' self-efficacy level. As the study showed, highly self-efficacious learners may find dialogic challenge beneficial and as an opportunity for the development of independent judgment; on the contrary, low self-efficacy learners may need more explicit strategy instruction, emotional support, and gradual training in feedback interpretation. This study has a number of limitations. The study's sample was made up of upper-intermediate EFL learners selected from two Iranian university branches. This implies that one should be cautious regarding the generalizability of the findings to other contexts and proficiency

levels. Also, the study assessed feedback literacy using self-report scores. Such an instrument may not capture a full picture of feedback-use behavior. Since the intervention in this present study consisted of fifteen sessions, further longitudinal studies are required to explore whether the gains obtained in feedback literacy are maintained after the study. Also, prospective studies on teacher-generated emergent feedback are called for across a wide range of proficiency levels, genres, and contexts.

Data availability statement

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Ethics statement

This study adhered to the ethical standards established by the authors' institution and the national guidelines associated with research conducted on human subjects in Iran. Based on the research ethics rules of the Ministry of Science and Research of Iran, studies that pose minimal risk in educational contexts and use a sample of adult participants do not need to be approved by an institutional review board (IRB; in this study the review board of the Islamic Azad University, Tehran Branch) if the research does not involve any clinical or psychological interventions, deception, or experimental manipulation. In such studies, no sensitive personal or health data are gathered, and all participants' written consent for participation is secured. Also, the participants' identities are kept confidential during all stages of the research. This study was fully in compliance with the above conditions. The sample comprised adult upper-intermediate EFL learners whose informed consent was secured; their participation was voluntary; and they were assured that their identities would be kept confidential through the use of pseudonyms. Moreover, the implemented intervention was a low-risk pedagogical practice as it involved no deceptive or experimental manipulation. All data collected, such as questionnaire data, written products, and transcribed and audio-recorded interviews, did not contain any sensitive personal or health-related information and they were used just for research purposes.

Therefore, the study gained exemption from the review board of the Islamic Azad University, and our institution did not need to receive formal exemption letters for such with such a minimal level of risk. However, it should be noted that the study was conducted in compliance with the Declaration of Helsinki and the APA Ethical Guidelines. All participants were completely briefed on the study's aims, their voluntary participation, complete confidentiality, and their right to withdraw at any stage without any consequences.

Author contributions

ST: Data collection and analysis, Writing- original draft; FN: Writing, Review and editing, Supervision; GHR: Writing, Review and editing.

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Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- Adams, D., & Chuah, K. M. (2022). Artificial intelligence-based tools in research writing. In *Artificial Intelligence in Higher Education* (pp. 169-184). CRC Press. <https://doi.org/10.1201/9781003184157-9>
- Aljaafreh, A., & Lantolf, J. P. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *The Modern Language Journal*, 78, 465–483. <https://doi.org/10.1111/j.1540-4781.1994.tb02064.x>
- Azkarai, A., & Calzada, A. (2024). *A multi-faceted view of engagement with language: A study with young EFL learners working on a collaborative writing task*. Classroom Discourse, 1-21. <https://doi.org/10.1080/19463014.2024.2321343>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Bruning, R., Dempsey, M., Kauffman, D., Mckim, C., & Zumbrunn, S. (2013). Examining dimensions of self-efficacy for writing. *Journal of Educational Psychology*, 105(1), 25– 38. <https://doi.org/10.1037/a0029692>
- Carless, D., & Boud, D. (2018). The development of student feedback literacy: enabling uptake of feedback. *Assessment & Evaluation in Higher Education*, 43(8), 1315-1325. <https://doi.org/10.1080/02602938.2018.1463354>
- Carless, D., & Winstone, N. (2023). Teacher feedback literacy and its interplay with student feedback literacy. *Teaching in Higher Education*, 28(1), 150-163. <https://doi.org/10.1080/13562517.2020.1782372>
- Cavalcanti, A. P., Barbosa, A., Carvalho, R., Freitas, F., Tsai, Y. S., Gašević, D., & Mello, R. F. (2021). Automatic feedback in online learning environments: A systematic literature review.

- Computers and Education: Artificial Intelligence*, 2, 100027. <https://doi.org/10.1016/j.caeai.2021.100027>
- Chhabra, P., & Sameer, B. M. (2024). *A study on the use of AI in academic curriculum and its role in the industry 5.0 revolution*. In *Artificial Intelligence and Communication Techniques in Industry 5.0* (pp. 333-345). CRC Press.
- Chiu, T. K., Xia, Q., Zhou, X., Chai, C. S., & Cheng, M. (2023). Systematic literature review on opportunities, challenges, and future research recommendations of artificial intelligence in education. *Computers and Education: Artificial Intelligence*, 4, 100118. <https://doi.org/10.1016/j.caeai.2022.100118>
- DeBusk-Lane, M. L., Zumbrunn, S., Bae, C. L., Broda, M. D., Bruning, R., & Sjogren, A. L. (2023). Variable-and person-centered approaches to examining construct-relevant multidimensionality in writing self-efficacy. *Frontiers in Psychology*, 14, 1091894. <https://doi.org/10.3389/fpsyg.2023.1091894>
- Gayed, J. M., Carlon, M. K. J., Oriola, A. M., & Cross, J. S. (2022). Exploring an AI-based writing Assistant's impact on English language learners. *Computers and Education: Artificial Intelligence*, 3, 100055. <https://doi.org/10.1016/j.caeai.2022.100055>
- Guo, K., & Wang, D. (2024). *To resist it or to embrace it? Examining ChatGPT's potential to support teacher feedback in EFL writing*. *Education and Information Technologies*, 1-29. <https://doi.org/10.1007/s10639-023-12146-0>
- Han, Y., & Xu, Y. (2021). Student feedback literacy and engagement with feedback: A case study of Chinese undergraduate students. *Teaching in Higher Education*, 26(2), 181-196. <https://doi.org/10.1080/13562517.2019.1648410>
- Hwang, S. (2025). Unpacking the Impact of Writing Feedback Perception on Self-Regulated Writing Ability: The Role of Writing Self-Efficacy and Self-Regulated Learning Strategies. *Behavioral Sciences*, 15(2), 100. <https://doi.org/10.3390/bs15020100>
- Hwang, S. (2025). Unpacking the Impact of Writing Feedback Perception on Self-Regulated Writing Ability: The Role of Writing Self-Efficacy and Self-Regulated Learning Strategies. *Behavioral Sciences*, 15(2), 100. <https://doi.org/10.3390/bs15020100>

- Kaufmann, E. (2021). Algorithm appreciation or aversion? Comparing in-service and pre-service teachers' acceptance of computerized expert models. *Computers and Education: Artificial Intelligence*, 2, 100028. <https://doi.org/10.1016/j.caeai.2021.100028>
- Lee, L. (2019). An exploratory study of using personal blogs for L2 writing in fully online language courses. In *Advances in Educational Technologies and Instructional Design* (pp. 145-163). IGI Global. <https://doi.org/10.4018/978-1-7998-1282-1.ch007>
- Li, Y. (2023). The effect of online collaborative writing instruction on enhancing writing performance, writing motivation, and writing self-efficacy of Chinese EFL learners. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1165221>
- Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In *Handbook of Second Language Acquisition* (pp. 413-468). Elsevier. <https://doi.org/10.1016/b978-012589042-7/50015-3>
- Lyster, R., Saito, K., & Sato, M. (2013). Oral corrective feedback in second language classrooms. *Language Teaching*, 46(1), 1-40. <https://doi.org/10.1017/s0261444812000365>
- Ma, M., Wang, C., & Teng, M. F. (2021). Using learning-oriented online assessment to foster students' feedback literacy in L2 writing during COVID-19 pandemic: A case of misalignment between micro-and macro-contexts. *The Asia-Pacific Education Researcher*, 30(6), 597-609. <https://doi.org/10.1007/s40299-021-00600-x>
- Mai, H. T. (2026). Evaluating the impact of using ChatGPT on EFL students' argumentative skills. *Discover Education*, 5, 189. <https://doi.org/10.1007/s44217-026-01153-1>
- Maier, U., & Klotz, C. (2022). Personalized feedback in digital learning environments: Classification framework and literature review. *Computers and Education: Artificial Intelligence*, 3, 100080. <https://doi.org/10.1016/j.caeai.2022.100080>
- Maslucha, S., Firmansyah, M. A., Uswah, M., & Rachmatian, N. A. (2024). Current practices of corrective feedback in Indonesian secondary EFL classrooms: A systematic review. *IREELL: Indonesian Review of English Education, Linguistics, and Literature*, 2(1), 65-82. <https://doi.org/10.30762/ireell.v2i1.2819>
- Memarzadeh, A. (2010). *IELTS maximiser educational book*. Basarang Publication.
- Mitchell, K. M., McMillan, D. E., & Rabbani, R. (2019). An exploration of writing self-efficacy and writing self-regulatory behaviours in undergraduate writing. *The Canadian Journal for the*

- Scholarship of Teaching and Learning*, 10(2). <https://doi.org/10.5206/cjsotl-rcacea.2019.2.8175>
- Molloy, E., Boud, D., & Henderson, M. (2020). Developing a learning-centred framework for feedback literacy. *Assessment & Evaluation in Higher Education*, 45(4), 527-540. <https://doi.org/10.1080/02602938.2019.1667955>
- Okonkwo, C. W., & Ade-Ibijola, A. (2021). Chatbots applications in education: A systematic review. *Computers and Education: Artificial Intelligence*, 2, 100033. <https://doi.org/10.1016/j.caeai.2021.100033>
- Pajares, F. (2003). Self-efficacy beliefs, motivation and achievement in writing: A review of the literature. *Reading and Writing Quarterly*, 19(2), 139-158. <https://doi.org/10.1080/10573560308222>
- Pajares, F., & Valiante, G. (2001). Gender differences in writing motivation and achievement of middle school students: A function of gender orientation? *Contemporary Educational Psychology*, 26(3), 366–381. <https://doi.org/10.1006/ceps.2000.1069>
- Pollitt, A. (2007). *The meaning of OUP test scores: The Oxford Placement Test and the Common European Framework of Reference*. Oxford University Press.
- Ruegg, R. (2018). The effect of peer and teacher feedback on changes in EFL students' writing self-efficacy. *The Language Learning Journal*, 46(2), 87-102. <https://doi.org/10.1080/09571736.2014.958190>
- Safari, F., & Ahmadi, A. (2024). *L2 learners' challenges in integrated writing tasks: Implications for writing teachers and developers of diagnostic assessments*. *The Language Learning Journal*, 1-18. <https://doi.org/10.1080/09571736.2023.2301604>
- Sari, E., & Han, T. (2024). The impact of automated writing evaluation on English as a foreign language learners' writing self-efficacy, self-regulation, anxiety, and performance. *Journal of Computer Assisted Learning*, 40(5), 2065-2080. <https://doi.org/10.1111/jcal.13004>
- Savage, A., & Mayer, P. (2006). *Effective academic writing: The short essay*. Oxford University Press.
- Shaona, L. (2025). The role of reading motivation and self-efficacy in enhancing EFL students' reading achievement. *Discover Education*, 4(1), 452. <https://doi.org/10.1007/s44217-025-00933-5>

- Shen, B., & Bai, B. (2024). *Chinese university students' self-regulated writing strategy use and EFL writing performance: Influences of self-efficacy, gender, and major*. *Applied Linguistics Review*. <https://doi.org/10.1515/applirev-2020-0103>
- Shen, B., Bai, B., & Park, M. (2023). Exploring Hong Kong primary students' English writing motivation: Relationships between writing self-efficacy and task value. *Journal of Multilingual and Multicultural Development*, 44(4), 324-338. <https://doi.org/10.1080/01434632.2020.1823397>
- Srinivasan, V., & Murthy, H. (2021). Improving reading and comprehension in K-12: Evidence from a large-scale AI technology intervention in India. *Computers and Education: Artificial Intelligence*, 2, 100019. <https://doi.org/10.1016/j.caeai.2021.100019>
- Sun, T., & Wang, C. (2020). College students' writing self-efficacy and writing self-regulated learning strategies in learning english as a foreign language. *System*, 90, 102221. <https://doi.org/10.1016/j.system.2020.102221>
- Sutton, P. (2012). Conceptualizing feedback literacy: Knowing, being, and acting. *Innovations in Education and Teaching International*, 49(1), 31-40. <https://doi.org/10.1080/14703297.2012.647781>
- Tan, X., Cheng, G., & Ling, M. H. (2025). Artificial intelligence in teaching and teacher professional development: A systematic review. *Computers and Education: Artificial Intelligence*, 8, 100355. <https://doi.org/10.1016/j.caeai.2024.100355>
- Tariq, U. (2024). *Nexus of essay writing and computer-assisted language learning (CALL) in English language classroom*. *Interactive Technology and Smart Education*. 6(3), 36-57. <https://doi.org/10.1108/ITSE-12-2023-0246>
- Teng, L. S., Peigian, P. S., & Xu, L. (2018). Conceptualizing writing self-efficacy in English as a foreign language contexts: Scale validation through structural equation modeling. *TESOL Quarterly*, 52(4), 911-942. <https://doi.org/10.1002/tesq.432>
- Woodrow, L. (2011). College English writing affect: Self-efficacy and anxiety. *System*, 39(4), 510-522. <https://doi.org/10.1016/j.system.2011.10.017>
- Yang, S. J., Ogata, H., Matsui, T., & Chen, N. S. (2021). Human-centered artificial intelligence in education: Seeing the invisible through the visible. *Computers and Education: Artificial Intelligence*, 2, 100008. <https://doi.org/10.1016/j.caeai.2021.100008>

- Yu, S., Di Zhang, E., & Liu, C. (2022). Assessing L2 student writing feedback literacy: A scale development and validation study. *Assessing Writing*, 53, 100643. <https://doi.org/10.1016/j.asw.2022.100643>
- Yu, S., & Liu, C. (2021). Improving student feedback literacy in academic writing: An evidence-based framework. *Assessing Writing*, 48, 100525. <https://doi.org/10.1016/j.asw.2021.100525>
- Zarei, M., Ahour, T., & Seifoori, Z. (2018). The effects of implicit, explicit, and emergent oral feedback on Iranian EFL learners' accuracy, fluency, and attitude. *Journal of Language Horizons*, 2(2), 75. https://journal.alzahra.ac.ir/article_4266_bffa18934c4c44d1fb1fd75ac6a8b392.pdf
- Zarei, M., Ahour, T., & Seifoori, Z. (2020). Impacts of implicit, explicit, and emergent feedback strategies on EFL learners' motivation, attitude and perception. *Cogent Education*, 7(1), 1727130. <https://doi.org/10.1080/2331186X.2020.1727130>
- Zhan, Y. (2022). Developing and validating a student feedback literacy scale. *Assessment & Evaluation in Higher Education*, 47(7), 1087-1100. <https://doi.org/10.1080/02602938.2021.2001430>
- Zhang, E. D., & Yu, S. (2024). 'I am not omniscient': An autoethnography inquiry into a novice L2 teacher's implementation of digital multimodal composing. *Computer Assisted Language Learning*, 1-29. <https://doi.org/10.1080/09588221.2024.2342876>
- Zhang, E. D., Zhou, N., & Yu, S. (2023). Assessing L2 secondary student writing feedback literacy and its predictive effect on their L2 writing performance. *Language Teaching Research*, 13621688231217665. <https://doi.org/10.1177/13621688231217665>
- Zhou, Q., Chen, L., & Hou, X. (2022). Exploring Chinese EFL undergraduates' writing from sources: Self-efficacy and performance. *Assessing Writing*, 54, 100663. <https://doi.org/10.1016/j.asw.2022.100663>

Appendix

Indirect coded feedback delivered by the teacher

Some people think that distance-learning programs can never be as good as traditional, face-to-face education. To what extent do you agree or disagree with this opinion?

Some people believe that traditional classroom education is always better than distance-learning, but I disagree with this opinion. I think distance-learning can be as good as face-to-face education, and in some ways even more convenient for many students. Although there are some disadvantages, the benefits of online learning make it a strong alternative.

First of all, distance-learning gives flexibility that traditional schools cannot offer. Students can study at their own pace and choose time that suit them. For instance, a person who works during the day can watch lectures at night. This is not possible in regular classes. Also, they don't need to travel long distances, which saves both money and time. This makes education accessible to people in remote areas or those with disabilities. So, for many learners, distance programs are very helpful.

Moreover, technology today provides many tools for interaction. Some people think online courses are lonely, but this is not true always. Video conferencing, discussion forums, and group chats allow students to communicate with teachers and classmates. In many cases, online resources are richer because you can watch recorded lessons and access materials anytime. Traditional classes depend on real-time note-taking, and if you miss something, it is gone. So, distance learning can actually be more effective for understanding.

Of course, face-to-face education has its own strengths, such as direct personal interaction and immediate feedback. For instance, to say it can never be as good is not fair. Both methods have their place, and for some subjects or situations, distance-learning works equally well.

In conclusion, I strongly disagree that distance-learning programs are never as good as traditional ones. With proper planning and motivation, they can offer the same quality of education. The key is how the student can use the opportunity, not just the mode of learning. Therefore, I strongly disagree that distance-learning is always inferior.

Error & Error code	Error & Error code
Error (1) → SVA	Error (13) → SVA
(2) → SVA	(14) → SS
(3) → Af	(15) → SVA
(4) → SVA	(16) → SVA
(5) → SVA	(17) → SVA
(6) → Pmc	(18) → Dev
(7) → SVA	(19) → can
(8) → SVA	(20) → ReB
(9) → SP	(21) → CD
(10) → WF	(22) → WC
(11) → SVA	(23) → call
(12) → SVA	(24) → LL

Indirect unfocused feedback delivered by the teacher

Revised writing sample based on indirect unfocused feedback delivered by the teacher

Some people think that distance-learning programs can never be as good as traditional, face-to-face education. To what extent do you agree or disagree with this opinion?

Some people believe that traditional classroom education is always better than distance-learning, but I disagree with this opinion. I think distance-learning can be as good as face-to-face education, and in some ways even more convenient for many students. Although there are some disadvantages, the benefits of online learning make it a strong alternative.

First of all, distance-learning gives flexibility that traditional schools cannot offer. Students can study at their own pace and choose time that suit them. For instance, a person who works during the day can watch lectures at night. This is not possible in regular classes. Also, they don't need to travel long distances, which saves both money and time. This makes education accessible to people in remote areas or those with disabilities. So, for many learners, distance programs are very helpful.

Moreover, technology today provides many tools for interaction. Some people think online courses are lonely, but this is not true always. Video conferencing, discussion forums, and group chats allow students to communicate with teachers and classmates. In many cases, online resources are richer because you can watch recorded lessons and access materials anytime. Traditional classes depend on real-time note-taking, and if you miss something, it is gone. So, distance learning can actually be more effective for understanding.

Of course, face-to-face education has its own strengths, such as direct personal interaction and immediate feedback. For instance, to say it can never be as good is not fair. Both methods have their place, and for some subjects or situations, distance-learning works equally well.

In conclusion, I strongly disagree that distance-learning programs are never as good as traditional ones. With proper planning and motivation, they can offer the same quality of education. The key is how the student can use the opportunity, not just the mode of learning. Therefore, I strongly disagree that distance-learning is always inferior.

Error code & Sentence number	Error code & Sentence number
Error (1): SVA → 3	Error (17): SB → 12
Error (2): SVA → 3	Error (18): SVA → 15
(3): Af → 5	(19): SVA → 19
(4): SVA → 6	(20): SVA → 22
(5): SVA → 8	(21): SVA → 5
(6): SVA → 9	(22): ReB → 7
(7): SVA → 10	(23): CD → 11
(8): WF → 10	(24): WC → 12
(9): SVA → 11	(25): call → 14
(10): SVA → 12	(26): LL → 18

Indirect focused feedback delivered by the teacher

Revised writing sample based on indirect focused feedback delivered by the teacher

Some people think that distance-learning programs can never be as good as traditional, face-to-face education. To what extent do you agree or disagree with this opinion?

Some people believe that traditional classroom education is always better than distance-learning, but I disagree with this opinion. I think distance-learning can be as good as face-to-face education, and in some ways even more convenient for many students. Although there are some disadvantages, the benefits of online learning make it a strong alternative.

First of all, distance-learning gives flexibility that traditional schools cannot offer. Students can study at their own pace and choose time that suit them. For instance, a person who works during the day can watch lectures at night. This is not possible in regular classes. Also, they don't need to travel long distances, which saves both money and time. Overall, it can mean that work and study are longer and less correct. This makes education accessible to people in remote areas or those with disabilities. So, for many learners, distance programs are very helpful.

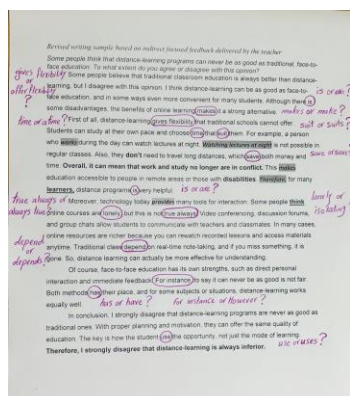
Moreover, technology today provides many tools for interaction. Some people think online courses are lonely, but this is not true always. Video conferencing, discussion forums, and group chats allow students to communicate with teachers and classmates. In many cases, online resources are richer because you can watch recorded lessons and access materials anytime. Traditional classes depend on real-time note-taking, and if you miss something, it is gone. So, distance learning can actually be more effective for understanding.

Of course, face-to-face education has its own strengths, such as direct personal interaction and immediate feedback. For instance, to say it can never be as good is not fair. Both methods have their place, and for some subjects or situations, distance-learning works equally well.

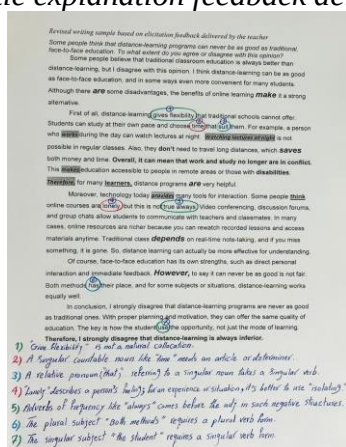
In conclusion, I strongly disagree that distance-learning programs are never as good as traditional ones. With proper planning and motivation, they can offer the same quality of education. The key is how the student can use the opportunity, not just the mode of learning. Therefore, I strongly disagree that distance-learning is always inferior.

I have circled the erroneous parts in your writing. Try to correct them.

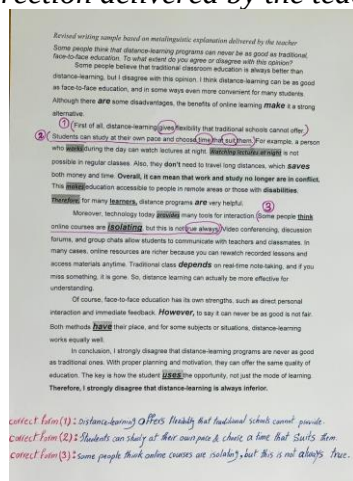
Elicitation feedback delivered by the teacher



Metalinguistic explanation feedback delivered by the teacher



Direct explicit correction delivered by the teacher



correct form (1): distance-learning offers flexibility that traditional schools cannot provide.
 correct form (2): Students can study at their own pace & choose a time that suits their time.
 correct form (3): Some people think online courses are flexible, but this is not always true.