



Research Article

# The Impact of LOA-Based Revision Strategies on Writing CAF of Iranian EFL learners: Gender in Focus

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## Abstract

The present study investigates the impacts of Learning-Oriented Assessment (LOA)-based feedback on the writing performance of Iranian English as a Foreign Language (EFL) learners, with a specific focus on the role of gender. Participants were 120 intermediate EFL university students (50 males, 70 females) selected via the Preliminary English Test (PET). They were divided into experimental and control groups using a quasi-experimental design. The experimental groups received LOA-based peer assessment, LOA-based self-assessment, and LOA-based teacher feedback, over 12 weeks, while the control group received traditional teacher-centered feedback. Writing performance was measured for complexity, accuracy, and fluency (CAF) through pre- and post-tests and analyzed using MANCOVA. The results revealed that compared with the control group, learners' writing performance was significantly improved by all three LOA-based interventions, with peer evaluation producing the greatest improvement. Furthermore, the interaction between treatment and gender is not significant, meaning that writing performance assessment methods did not affect male and female learners differently. The findings suggest that the study shows that feedback is not just evaluative but also transformative. The results of the present study have some pedagogical implications.

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**Keywords:** Academic Writing Ability; Expository Essay; Learning Oriented Assessment

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## 1. Introduction

Learning to write in English as a Foreign Language (EFL) is a unique and often difficult task because it requires not only grammatical accuracy and lexical richness but also coherence, cohesion, and a sophisticated organization of ideas (Jan & Abdul, 2022). Traditionally, teaching and assessing writing have focused mainly on the final product. There has often been a strong emphasis on finding and correcting errors. While this approach is useful, it can overlook the complex and iterative processes

that are essential for developing writing skills. It risks turning writing into a set of simple language rules instead of recognizing it as a complex cognitive and social activity (Bakhshi et al., 2025). As a result, most teachers see the need for teaching methods that truly support learners throughout the entire writing process. These methods should encourage deep learning instead of just fixing surface issues.

At the heart of this evolving understanding is the concept of revision. It goes beyond just correcting errors; it involves rethinking, reorganizing, and improving one's

ideas and how they are expressed. Effective revision requires critical self-evaluation and the ability to take in feedback from others. It also demands a steady commitment to making one's writing clearer, more convincing, and more impactful. This ongoing dynamic interaction between drafting and refining leads to real learning, turning a basic text into a polished piece of communication.

The role of assessment in this developmental path is clearly important. However, the concept of assessment has undergone significant changes. It has shifted from mainly a summative role, which measures what has been learned, to a more integrated, formative approach that focuses on improving the learning process itself. This change highlights that assessment should not just be a final step; it should be a key part of the learning cycle. It should provide ongoing opportunities for development and improvement (Jones, 2021). This philosophical reorientation lays the groundwork for the theoretical framework of the present study. Learning-Oriented Assessment (LOA) has emerged as a significant topic within the field of EFL writing instruction (Ishikawa, 2018). Rather than traditional assessment methods, LOA emphasizes learners' active involvement in learning activities without primarily scoring them for their language proficiency (Ashrafian et al., 2026; Babaii, 2019; Carless, 2015; Derakhshan & Ghiasvand, 2022). The assessment method, as per Carless (2007), emphasizes the learners' learning processes and not just measures their language proficiency. Within the framework of LOA, feedback and learning are integrated and occur concurrently. This approach comprises three core components: task, feedback, and evaluation, with feedback receiving particular scholarly attention (Carless, 2006).

LOA offers a comprehensive theoretical rationale for comprehending and enhancing the influence of diverse revision strategies on EFL writing skills. According to Estaji and Safari (2023), LOA is a comprehensive method of assessment that prioritizes the improvement of learning above all else. Its main ideas are integrating assessment with teaching, giving feedback that is useful and timely, fostering learner self-regulation, and getting them involved in the assessment process. The LOA framework tries to give learners more control over their own education. LOA treats writing as a process of constant improvement, where each draft and revision cycle is a chance for diagnostic reflection and strategic intervention. This fits perfectly with the iterative nature of writing development.

So, different revision strategies are not only useful for teaching but also necessary parts of a writing curriculum based on LOA. Self-revision, for instance, is an important metacognitive process in which learners evaluate their own writing against established criteria. From the LOA

standpoint, self-revision transcends mere error identification; it encompasses the enhancement of self-awareness, the establishment of internal evaluative criteria, and the promotion of self-regulation—fundamental principles of learner autonomy (Kim & Kim, 2021). Through self-revision, learners assume responsibility for their learning, evolving into more discerning writers capable of independently recognizing areas for improvement and devising corrective strategies.

Peer revision, on the other hand, is when learners give and get feedback from each other. When put within an LOA approach, this collaborative strategy uses social learning and different points of view to improve writing. It not only gives learners different ways to look at a text, but it also helps them improve their critical thinking skills by having them look at others' writing and their communication skills by having them give constructive feedback (Jin et al., 2021). Peer revision in LOA creates a community of learners where shared responsibility and mutual support for learning are emphasized.

Teacher revision, or more generally, teacher feedback, is still an important part of improving writing. However, an LOA perspective changes the teacher's role from just correcting mistakes to helping learners learn. In this framework, teacher feedback is strategic, focused, and gives clear support that helps students understand more deeply instead of just giving them answers (Gonzalez-Torres & Sarango, 2023). It begins with higher-order concerns and then moves on to lower-order mechanics, to help the students become more independent in their revision rather than making them reliant on others.

In addition, the individual differences among learners significantly influence the perception of revision strategies and ultimately affect writing improvement. Gender has been recognized as a determinant that can affect learning styles, communication preferences, and reactions to pedagogical interventions in EFL contexts (Zheng et al., 2025). Understanding these differences is important for tailoring effective teaching methods and ensuring that revision strategies are optimally implemented to help all students. Consequently, it is essential to examine the distinctions between female and male EFL learners regarding their engagement with and advantages derived from teacher-revision, peer-revision, and self-revision within the LOA framework. These differences may be evident in their attitudes toward receiving and providing feedback, their preferred methods of revision, or the particular elements of writing they emphasize during the revision process. These insights are essential for formulating gender-sensitive instructional strategies that optimize the efficacy of LOA-informed revision practices.

Within the framework of LOA, the importance of gender becomes even more pronounced. LOA emphasizes learner agency, self-regulation, and active participation in

the feedback process. All of these can be experienced differently by female and male learners due to socialization patterns, classroom interaction norms, and confidence in assessment judgments. For example, students' comfort with peer critique, willingness to self-evaluate, and responsiveness to teacher feedback may differ by gender (Ocampo et al., 2023), which determines the effectiveness of LOA-based revision practices.

## 2. Review of the Literature

The concept of LOA indicates that each assessment level should aid in improving educational outcomes and confirming the reliability of assessment results (Ma et al., 2019). Two prominent frameworks are: the Learning-Oriented Assessment Framework (LOAF) introduced by Carless (2007) and Carless et al. (2006), and the 'Framework of LOA' suggested by Turner and Purpura (2014). Two primary objectives of The LOAF are to assess both the learning element and the learners' achievements. Carless (2008) states that LOA aims to emphasize the learning aspect of assessments to accomplish this through both formative and summative assessments. The components of LOA are shown graphically in Fig. 1. According to Carless, the three components of LOA are seen as interconnected instead of separate parts, which can be clearly observed in Fig. 1: a) assessment activities as learning tasks, b) student participation (self and peer-assessment), c) loops of feedback or feed-forward and feedback.

With respect to the moment system, the 'Framework of LOA,' introduced by Turner and Purpura (2014), presents LOA as an integrated assessment method that

centers on the student across seven interconnected aspects. This framework also aids teachers in identifying effective teaching strategies (Purpura & Turner, 2014). The 'Framework for LOA' has been adopted to meet the research needs. Purpura and Turner's (2014) 'Framework of LOA' is used in the present study because of its thorough descriptions of the different aspects. The LOA framework includes seven aspects: the contextual, the elicitation, the proficiency, the learning, the instructional, the interactional, and the affective.

The LOA contextual aspect consists of two stages: the micro level and the macro level. In the first stage, various elements like socio-cultural norms, socio-political influences, and classroom expectations impact assessment, curriculum, and instruction. In the second stage, personal characteristics of teachers, their decisions, and the establishment of classroom culture shape these same elements. Therefore, it can be inferred that the contextual aspect reflects teachers' traits (such as assessment literacy) that influence learning and assessment within a classroom setting. The elicitation aspect of LOA pertains to the contexts in which language is elicited through different methods. In this process, students' abilities are observed, reflected upon, and addressed, serving as a form of feedback for possible intervention steps. The proficiency aspect of LOA helps to determine what needs to be assessed, how to monitor student performance, and what aspects should be emphasized in feedback. The Learning Dimension of LOA encompasses views on how students engage with knowledge and ultimately acquire it. Additionally, it is important to understand how teaching and assessment are framed and executed.

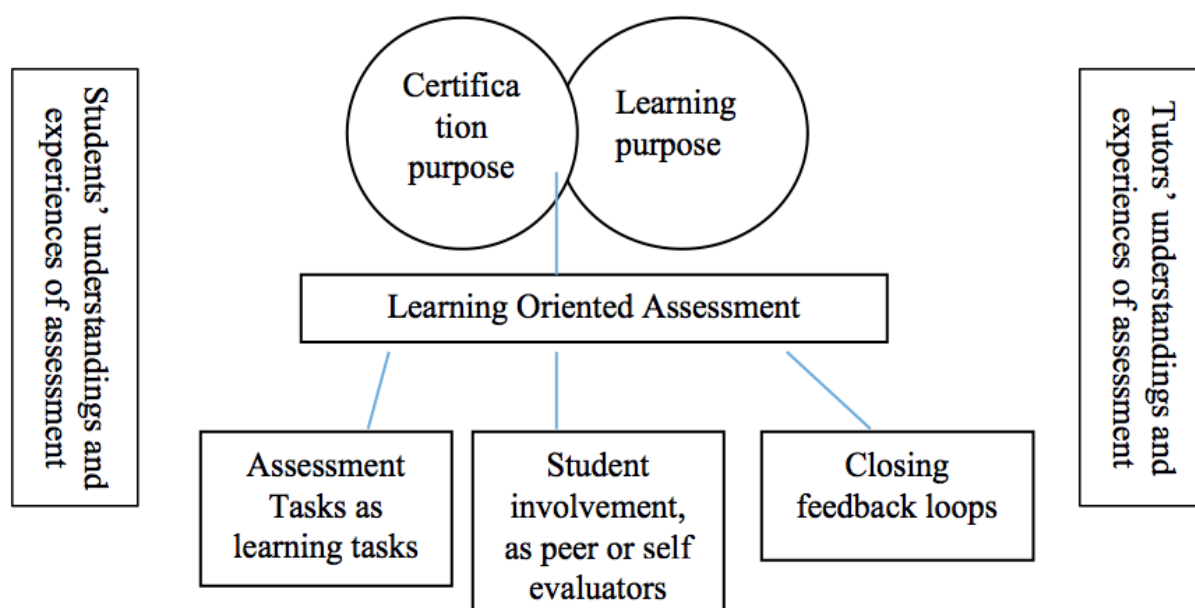


Figure 1. Framework for learning-oriented assessment (Carless, 2009)

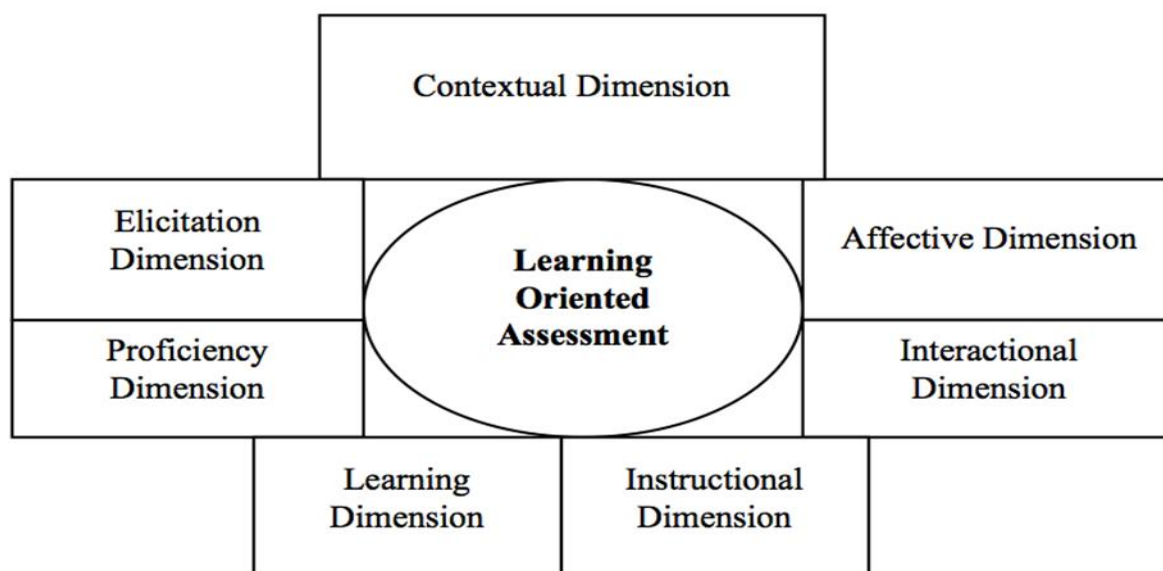


Figure 2. LOA framework aspects (Reprinted from Purpura & Turner, 2014)

The function of self-regulation and feedback in learning is also viewed as an essential component of the learning aspect of LOA.

The instructional aspect of LOA pertains to the Content and Content Knowledge of teachers. Therefore, it is vital to reflect on the question: 'In what ways does a teacher's knowledge of teaching content impact their grasp of LOAs and their decisions about subsequent learning methods?' The Interactional Dimension of LOA represents how LOA is arranged in a way that fosters interaction. Finally, the Affective Dimension of LOA refers to the student's emotions and motivation levels concerning their involvement in the assessment process. In simpler terms, it connects to traits such as attitude, feelings, motivation, character, and beliefs. In conclusion, the seven aspects of LOA are depicted in Fig. 2 below.

In the framework of the present study, planned assessments (teacher-generated and achievement tests), internal assessments, external assessments, and spontaneous assessments (talk in interaction) were the independent variables that were examined. The elements related to the independent variables are: timed writing quizzes, pre-test, and post-test as achievement tests; patchwork texts, reflective diary, weekly personal response, same day feedback, portfolio, and participation in weekly tutorials as self-regulated tasks; mini projects (peer critique and peer assessment), team projects (group critique and group assessment), computer-mediated collaborative writing, and in-class feedback as peer and group tasks as peer and group tasks.

The following research questions were addressed to shed some light on the efficacy of LOA:

What is the impact of LOA-based teacher-revision, LOA-based self-revision, and LOA-based peer-revision strategies on the CAF (complexity, accuracy, and fluency) of Iranian EFL learners' writings?

Is there any significant difference among the impacts of LOA-based teacher-revision, LOA-based self-revision, and LOA-based peer-revision strategies on the writings of Iranian EFL learners across gender?

### 3. Method

#### 3.1. Participants

120 male and female English students at the BA level at Islamic Azad University, Ghazvin Branch, participated in the present study. At the time of the study, they were sophomores attending basic writing classes. These participants were selected through convenience sampling (a non-probability sampling that involves selecting a sample from a readily available portion of the population) from a pool of 140 students on the basis of their results on the Preliminary English Test (PET). The results of PET showed that the 120 students' scores were one standard deviation above and below the mean, forming a homogeneous group of individuals who were all proficient in the English language, with ages ranging from 19 to 24. Fifty of them were male students, while seventy of them were female students. They were native speakers of the Persian and Azeri languages and were divided into four groups at random. There were three experimental groups and one control group. Three experimental groups included LOA-based teacher-revision, self-revision, and peer-revision strategies. Each group had 30 participants. Despite the implementation of random assignment, the gender distribution among the groups was not entirely balanced (for instance, the peer-revision group included 13 males and 17 females). This disparity in gender distribution was considered when analyzing findings associated with gender effects, and thus, conclusions concerning gender differences were drawn with caution.

Because the participants were selected from one specific institution and had a limited range of language proficiency (BA-level sophomores), we should be careful about applying the results to other proficiency levels, different institutions, or various educational cultures. This is in line with the typical limitations of quasi-experimental research in education. Ethical considerations were observed throughout the study. Participation was voluntary, and informed consent was taken from all participants before gathering data. Participants were assured that their course grades were not affected by their participation or withdrawal, and all the data was made anonymous for the research goals.

### 3.2. Instrumentation

The purposes of this study were accomplished using the following instruments:

1. Preliminary English Test (PET); 2. The writing pre-test/post-test

#### 3.2.1. *The preliminary English test (PET)*

During the initial stages of the study, the Preliminary English Test (PET) created by the University of Cambridge ESOL Examinations was used to select homogeneous individuals based on their general English aptitude. The test originally consists of: reading, speaking, writing, and listening. Since the listening and speaking sections were outside of the scope of the present study, they were eliminated. The reading section consists of 35 matching items and multiple-choice, divided into three sections: a vocabulary cloze test, two reading texts, and sign interpretation. The writing section consists of three parts: two writing tasks, including a story and a letter of appreciation, and five completion form items. The writing and reading sections received a combined score of 20 and 40, respectively. Furthermore, two raters graded the writing section of the PET independently. Cronbach's alpha showed that the writing and reading sections had a high-reliability index ( $r = 0.90$ ).

#### 3.2.2. *The writing pretest/posttest*

The other instrument was a 150-word writing pretest regarding "Advantages and disadvantages of using technology in university learning," which was completed within 35 minutes during a pilot study. This topic was chosen because it was believed to be general, and participants had sufficient topical knowledge to write. Moreover, this topic was particularly chosen to assess the students' expository writing, as students frequently use this style to expose or explain their thoughts. In academic writing, a minimum of 150 words in a paragraph is recommended, and this was also examined in a pilot study

to determine the appropriate length of the planned one-paragraph writing. This pilot study also estimated that composing the essay would take approximately 30 to 35 minutes. The participants' writing was assessed by two raters: a PhD holder in TEFL with the experience of ten years in teaching English essay writing and the researcher. The writings were rated by using the Scoring Guide for Writing (2002) developed by California State University, Fresno (Appendix A). The high coefficients of correlation between the two raters' scores for both the pretest (0.90) and posttest (0.92) demonstrated the high inter-rater reliability in their evaluations in both assessments. The researcher used [Wigglesworth and Storch \(2009\)](#) to assess the complexity, accuracy, and fluency of participants' written outputs in a pretest/posttest. Complexity was measured by calculating the ratio of clauses to t-units. To measure accuracy, global units were determined by calculating the ratio of error-free t-units to all t-units, as well as error-free clauses to total clauses. Writing fluency was calculated by finding "the average number of words, t-units, and clauses" (p. 449). Two raters conducted the procedure by jointly rating four essays to achieve consensus. The inter-rater reliability assessed using Pearson's correlation coefficient, demonstrated consistency between the two raters (0.97 for complexity, 0.98 for accuracy, and 0.97 for fluency).

### 3.3. Procedure

First, 120 EFL learners were selected through convenience sampling to take part in the study. During the first session, participants completed a pre-test consisting of an expository writing task, which was evaluated using the Scoring Guide for Writing (2002) developed by California State University Fresno. The researchers applied [Wigglesworth and Storch \(2009\)](#) for measuring the complexity, accuracy, and fluency of participants' written outputs in a pretest and posttest. The achievement tests, including pre-tests and post-test exams, as well as timed writing quizzes, were administered to the control group using 'routine procedures' of academic writing. Building upon the foundational work of [Er and Farhady \(2023\)](#), all three experimental groups followed standardized 'LOA Procedures' which included achievement tests like pre-tests, timed writing quizzes, expository essays, post-tests, and self-regulated tasks like same-day feedback, reflective diaries and journals, patchwork texts, weekly personal responses, portfolios, participation in weekly tutorials, peer and group tasks like computer-mediated collaborative writing, team projects (group critique and group assessment), in-class feedback, and mini projects (peer critique and peer assessment). The main systematic difference among the experimental groups was related to the revision agent utilized during feedback:

• In the LOA-based peer-revision group, feedback was mainly carried out through peer interaction and collaborative critique.

• In the LOA-based self-revision group, the same tasks were executed individually, emphasizing metacognitive self-evaluation.

• In the LOA-based teacher-revision group, the identical LOA tasks included guided teacher feedback as the primary source of revision input.

• The control group continued with a traditional product-oriented writing instruction utilizing the *Effective Academic Writing* textbook. Instruction was made up of teacher explanation, model texts, as well as teacher's

feedback on the final work. No organized formative assessments, peer feedback, self-assessment activities, portfolios, or reflective exercises were used. The time spent on teaching was the same for the experimental groups; however, the feedback given was not very frequent or detailed, and it wasn't based on the LOA principles. The following are the complete descriptions of the LOA elements and processes that the experiment groups utilized as an intervention. The "assigned and assessed tasks" and "self-regulated and collaborative tasks" are two primary types of activities, as shown in [Table 1](#).

**Table 1.** Collaborative and self-regulated tasks

	Self-Regulated Tasks
Reflective Diary (RD)	Writing about different topics: the disadvantages of advertising, the advantages of having educated parents
Same Day Feedback (SDF)	The teacher asks questions on a digital platform on the same day that the students are in class. The students are also requested to give feedback and suggestions on each other's answers.
Weekly Personal Response (WPR)	Every week, students prepare questions, submit them to the Blackboard system, respond to all of the questions that other students have posted, compile their responses, and forward them to the teacher
Portfolio Assessment (PA)	Gathering students' work during the intervention to evaluate their performance, progress, and accomplishments. Regarding essay drafts, citation, editing, summarizing, and paraphrasing
Participation in Weekly Tutorials (PWT)	Students receive help and feedback during tutorials, which are 15-minute, individual sessions about academic writing.
Patchwork Text Assessment	Learners were required to complete frequent short writing assignments, patches, including different expository writings. The teacher continuously reviewed the students' work and provided formative feedback in the teacher revision group. In a peer revision group, students collaboratively analyzed each other's writings while students themselves evaluated their own writings in self-revision group.
Team Project (Group Critique and Group Assessment) (TP)	Peer and Group Tasks Utilizing the academic writing skills they acquired during the intervention, including collaborative writing skills, groups must write reaction papers to the chosen papers. "Assessment criteria" were used to evaluate the degree of participation in completing a group activity as well as their contributions to group work and their individual efforts.
Mini Projects (Peer Critique and Peer Assessment) (MP)	Students evaluate one another's work and have their own work evaluated by their peers. Peer participation also helped to personalize the learning process, which may encourage further learning.
In-class Feedback (ICF)	During in-class exercises, students had to give feedback, critique, revise, and reflect on their peers' writing assignments.
Computer-Mediated Collaborative Writing (CMCW)	Using technical instruments such as Blackboard and Google Docs (Online Education Platform), students collaborate to brainstorm ideas for paragraphs, discuss the writing assignments, and create a unified online text on a web-based platform.

**Table 2.** Routine procedures and weekly LOA procedures

	LOA Procedures	Peer Revision Experimental Group	Self-Revision Experimental Group	Teacher Revision Experimental Group	Routine Procedures Control Group
WEEK 1: Researched Essay	Daily Tasks:	Same Day Feedback 1	Same Day Feedback 1	Same Day Feedback 1	
	Weekly Tasks:	PRE-TEST / Expository Essay, Participation in Weekly Tutorials 1, Weekly Personal Response 1, Mini Project (Peer Critique & Assessment)1	PRE-TEST / Expository Essay, Participation in Weekly Tutorials 1, Weekly Personal Response 1, Mini Project (SELF-Critique & SELF-Assessment)1	PRE-TEST / Expository Essay, Participation in Weekly Tutorials (with intensive Teacher Feedback) 1, Weekly Personal Response 1, Mini Project (Teacher Critique & SELF-Assessment)1	PRE-TEST / Expository Essay, Tasks from Effective Academic Writing Book/ In-class instruction, feedback Activities
WEEK 2	Daily Tasks:	Same Day Feedback 2, Reflective Diary 1, In-class Feedback (Peer-focused)1	Same Day Feedback 2, Reflective Diary 1, In-class Feedback (Self-focused)1	Same Day Feedback 2, Reflective Diary 1, In-class Feedback (Teacher-focused)1	In-class instruction, feedback Activities / Tasks from Effective Academic Writing Book
	Weekly Tasks:	Collaborative analysis of patches 1, Portfolio 1, Computer Mediated Collaborative Writing 1, Team Project (Group Critique & Assessment) 1	Patchwork Text (Individual writing and self-evaluation focus) 1, Portfolio 1, Individual writing on shared platform 1, Team Project (Self Critique & Assessment) 1	Patchwork Text (Individual writing with teacher feedback) 1, Portfolio (with intensive Teacher Feedback) 1, Teacher-guided feedback through same digital platform 1, Team Project (Teacher Critique & Assessment) 1	Tasks from Effective Academic Writing Book / In-class instruction, feedback Activities
WEEK 3	Daily Tasks:	Same Day Feedback 3	Same Day Feedback 3	Same Day Feedback 3	Tasks from Effective Academic Writing Book/ In-class instruction, feedback Activities
	Weekly Tasks:	Participation in Weekly Tutorials 2, Weekly Personal Response 2, Mini Project (Peer Critique & Assessment) 2	Participation in Weekly Tutorials 2, Weekly Personal Response 2, Mini Projects (SELF-Critique & SELF-Assessment) 2	Participation in Weekly Tutorials (with intensive Teacher Feedback) 2, Weekly Personal Response 2, Mini Projects (Teacher-Critique & SELF-Assessment) 2	
WEEK 4:	Daily Tasks:	In-class Feedback (Peer-focused) 2, Same Day Feedback 4	In-class Feedback (Self-focused) 2, Same Day Feedback 4	In-class Feedback (Teacher-focused) 2, Same Day Feedback 4	In-class instruction, feedback Activities / Tasks from Effective Academic Writing Book
	Weekly Tasks:	Computer Mediated Collaborative Writing 2, Collaborative analysis of patches 2, Portfolio 2	Individual writing on shared platform 2, Patchwork Text (Individual writing and self-evaluation focus) 2, Portfolio 2	Teacher-guided feedback through same digital platform 2, Patchwork Text (Individual writing with teacher feedback) 2, Portfolio (with intensive Teacher Feedback) 2	

**Table 2.** Routine procedures and weekly LOA procedures (continued)

	LOA Procedures	Peer Experimental Group	Revision Group	Self-Revision Experimental Group	Teacher Experimental Group	Revision	Routine Procedures
WEEK 5:	Daily Tasks:	Reflective Diary 2, Same Day Feedback 5	Same Day Feedback 5, Reflective Diary 2	Same Day Feedback 5, Reflective Diary 2	Same Day Feedback 5, Reflective Diary 2		Tasks from the Effective Academic Writing Book, In-class instruction, feedback, Activities / Timed Writing Quiz
	Weekly Tasks:	Participation in Weekly Tutorials 3, Weekly Personal Response 3, Mini Project (Peer Critique & Assessment) 3, Timed Writing Quiz	Participation in Weekly Tutorials 3, Weekly Personal Response 3, Mini Projects (SELF-Critique & SELF-Assessment) 3, Timed Writing Quiz	Participation in Weekly Tutorials (with intensive Teacher Feedback) 3, Weekly Personal Response 3, Mini Projects (Teacher-Critique & Assessment) 3, Timed Writing Quiz			
WEEK 6:	Daily Tasks:	Same Day Feedback 6, In-class Feedback (Peer-focused)3	Same Day Feedback 6, In-class Feedback (self-focused)3	Same Day Feedback 6, In-class Feedback (Teacher-focused)3			Tasks from Effective Academic Writing Book/ In-class instruction, feedback Activities
	Weekly Tasks:	Computer Mediated Collaborative Writing 3, Collaborative analysis of patches 3, Portfolio 3, Team Project (Group Critique & Assessment) 2	Individual writing on shared platform 3, Patchwork Text (Individual writing and self-evaluation focus) 3, Portfolio 3	Teacher-guided feedback through same digital platform 3, Patchwork Text (Individual writing with teacher feedback) 3, Portfolio (with intensive Teacher Feedback) 3			
WEEK 7:	Daily Tasks:	Same Day Feedback 7	Same Day Feedback 7	Same Day Feedback 7			Tasks from the Effective Academic Writing Book/ In-class instruction, feedback, Activities /
	Weekly Tasks:	Participation in Weekly Tutorials 4, Weekly Personal Response 4, Mini Project (Peer Critique & Assessment) 4	Participation in Weekly Tutorials 4, Weekly Personal Response 4, Mini Projects (SELF-Critique & SELF-Assessment) 4	Participation in Weekly Tutorials (with intensive Teacher Feedback) 4, Weekly Personal Response 4, Mini Projects (Teacher-Critique & SELF-Assessment) 4			
WEEK 8:	Daily Tasks:	In-class Feedback (Peer-focused) 4, Reflective Diary 3, Same Day Feedback 8	In-class Feedback (Self-focused) 4, Same Day Feedback 8, Reflective Diary 3	In-class Feedback (Teacher-focused) 4, Same Day Feedback 8, Reflective Diary 3			Tasks from the Effective Academic Writing Book /In-class instruction, feedback, Activities, Timed Writing Quiz
	Weekly Tasks:	Computer Mediated Collaborative Writing 4, Collaborative analysis of patches 4, Timed Writing Quiz, Portfolio 4	Individual writing on shared platform 4, Patchwork Text (Individual writing and self-evaluation focus) 4, Portfolio 4, Timed Writing Quiz	Teacher-guided feedback through the same digital platform 4, Patchwork Text (Individual writing with teacher feedback) 4, Portfolio (with intensive Teacher Feedback) 4, Timed Writing Quiz			

**Table 2.** Routine procedures and weekly LOA procedures (continued)

	LOA Procedures	Peer Experimental Group	Revision Experimental Group	Self-Revision Experimental Group	Teacher Experimental Group	Revision Experimental Group	Routine Procedures
WEEK 9:	Daily Tasks:	Same Day Feedback 9	Same Day Feedback 9	Same Day Feedback 9	Same Day Feedback 9	Same Day Feedback 9	Tasks from the Effective Academic Writing Book/ In-class instruction, feedback, Activities
	Weekly Tasks:	Participation in Weekly Tutorials 5, Weekly Personal Response 5, Mini Project (Peer Critique & Assessment) 5	Weekly Personal Response 5, Participation in Weekly Tutorials 5, Mini Projects (SELF-Critique & SELF-Assessment) 5	Weekly Personal Response 5, Participation in Weekly Tutorials 5, Mini Projects (SELF-Critique & SELF-Assessment) 5	Participation in Weekly Tutorials (with intensive Teacher Feedback) 5, Weekly Personal Response 5, Mini Projects (Teacher-Critique & SELF-Assessment) 5	Participation in Weekly Tutorials (with intensive Teacher Feedback) 5, Weekly Personal Response 5, Mini Projects (Teacher-Critique & SELF-Assessment) 5	
WEEK 10:	Daily Tasks:	Same Day Feedback 10, In-class Feedback (Peer-focused) 5	Same Day Feedback, In-class Feedback (Self-focused) 5	Same Day Feedback 10, In-class Feedback (Teacher-focused) 5	Same Day Feedback 10, In-class Feedback (Teacher-focused) 5	Same Day Feedback 10, In-class Feedback (Teacher-focused) 5	Tasks from the Effective Academic Writing Book/ In-class instruction, feedback Activities
	Weekly Tasks:	Computer Mediated Collaborative Writing 5, Collaborative analysis of patches 5, Portfolio 5, Team Project (Group Critique & Assessment) 3	Individual writing on shared platform 5, Patchwork Text (Individual writing and self-evaluation focus) 5, Portfolio 5	Individual writing on shared platform 5, Patchwork Text (Individual writing with teacher feedback) 5, Portfolio (with intensive Teacher Feedback) 5	Teacher-guided feedback through same digital platform 5, Patchwork Text (Individual writing with teacher feedback) 5, Portfolio (with intensive Teacher Feedback) 5	Teacher-guided feedback through same digital platform 5, Patchwork Text (Individual writing with teacher feedback) 5, Portfolio (with intensive Teacher Feedback) 5	
WEEK 11:	Daily Tasks	Same Day Feedback 11	Same Day Feedback 11	Same Day Feedback 11	Same Day Feedback 11	Same Day Feedback 11	Tasks from Effective Academic Writing Book/ In-class instruction, feedback, Activities
	Weekly Tasks:	Participation in Weekly Tutorials 6, Weekly Personal Response 6, Mini Project (Peer Critique & Assessment) 6	Participation in Weekly Tutorials 6, Weekly Personal Response 6, Mini Projects (SELF-Critique & SELF-Assessment) 6	Participation in Weekly Tutorials 6, Weekly Personal Response 6, Mini Projects (SELF-Critique & SELF-Assessment) 6	Participation in Weekly Tutorials (with intensive Teacher Feedback) 6, Weekly Personal Response 6, Mini Projects (Teacher Critique & Assessment) 6	Participation in Weekly Tutorials (with intensive Teacher Feedback) 6, Weekly Personal Response 6, Mini Projects (Teacher Critique & Assessment) 6	
WEEK 12:	Daily Tasks	Same Day Feedback 12, In-class Feedback (Peer-focused) 6	Same Day Feedback 12, In-class Feedback (Self-focused) 6	Same Day Feedback 12, In-class Feedback (Teacher-focused) 6	Same Day Feedback 12, In-class Feedback (Teacher-focused) 6	Same Day Feedback 12, In-class Feedback (Teacher-focused) 6	Tasks from the Effective Academic Writing Book/ In-class instruction, feedback, Activities / POSTTEST / Expository Essay Writing Final Exam
	Weekly Tasks:	Computer Mediated Collaborative Writing 6, Collaborative analysis of patches 6, Portfolio 6, Team Project, POSTTEST / Expository Essay Writing	Individual writing on shared platform 6, Patchwork Text (Individual writing and self-evaluation focus) 6, Portfolio 6, POSTTEST / Expository Essay Writing	Individual writing on shared platform 6, Patchwork Text (Individual writing with teacher feedback) 6, Portfolio (with intensive Teacher Feedback) 6, POSTTEST / Expository Essay Writing	Teacher-guided feedback through the same digital platform 6, Patchwork Text (Individual writing with teacher feedback) 6, Portfolio (with intensive Teacher Feedback) 6, POSTTEST / Expository Essay Writing	Teacher-guided feedback through the same digital platform 6, Patchwork Text (Individual writing with teacher feedback) 6, Portfolio (with intensive Teacher Feedback) 6, POSTTEST / Expository Essay Writing	

The following table provides a detailed overview of the weekly 'LOA procedures' and 'routine procedures' for both the experimental and control groups. Therefore, [Table 2](#) outlines the weekly guidelines for these groups. The experimental and control groups were given varied interventions, as shown in [Table 2](#) above. Although all three experimental groups operated within LOA framework (Turner & Purpura, 2014), their main difference was on the agent of revision within that framework.

The LOA-based peer-revision group participated in cooperative activities including computer-mediated collaborative writing, peer critique, and peer assessment, making peer interaction the main revision mechanism. The LOA-based self-revision group concentrated on metacognitive, self-regulated tasks, including self-evaluation and self-criticism, where the learner served as the main revision agent.

Last but not least, the LOA-based teacher-revision group did not participate in organized peer or self-assessment activities; instead, they experienced LOA through guided feedback channels, with the teacher serving as the primary source of expert revision input. This approach enabled direct comparison of each revision agent's effectiveness within the same learning-oriented assessment setting. The duration of the intervention was 12 weeks. In the first week, the experimental and control groups each received a pre-test (expository essay).

The control group received regular feedback from the teacher and underwent a standard writing instruction approach. However, after the LOA procedures, the experimental groups were given additional tasks, including the previously described Self-Regulated and Collaborative Tasks. Both the experimental and control groups took a post-test (expository essay) at the 12th week of the intervention. The participants were given 35 minutes to write an expository essay regarding "Effects of technology on students' study habits," approximately 150 words in length.

To reduce teacher-related differences, the same teacher taught all four groups using the same course syllabus. Before the intervention started, the teacher took part in training sessions about LOA principles and procedures to make sure the implementation was the same in all the experimental conditions. To ensure fidelity of implementation, all training sessions were documented using fidelity checklists and intervention logs to ensure adherence to prescribed content, schedule, and interaction procedures. The participants' first languages, which are Persian and Azeri, along with their previous educational experiences, might have affected how they interacted with English academic writing. In Iranian schools, teaching has usually been teacher-centered, which might make students less prepared for self- and peer-assessment feedback. To deal with this, LOA procedures were gradually

introduced, with clear modeling and scaffolding. The LOA framework is mostly based on Western assessment theory, but it was tried to contextualize tasks in local classrooms. Even so, it's important to think about cultural factors like perspectives regarding self and peer critique should be taken into account when interpreting the findings.

### 3.4. Design of the study

A quasi-experimental design was used in this research, which is categorized as quantitative research. Unlike a true experiment, where groups are not assigned at random in chemistry experiments, the aim is to establish cause-and-effect relationships.

Quasi-experiments typically take place in real-world environments where randomly assigning participants is challenging or not possible. They are often utilized to assess the effectiveness of a specific treatment, like a psychotherapy method or an educational intervention (Cook & Campell, 1979).

### 3.5. Data Analysis

Descriptive statistics, along with MANCOVA, were used. The collected data were analyzed using SPSS Software, version 25. First, the Kolmogorov-Smirnov (K-S) test was conducted to assess the normality of data distribution. Although pre-test scores were included as covariates to check initial differences in proficiency, the non-significant relationship between complexity scores of pre-test and post-test suggests that the findings related to complexity should be interpreted with caution. Second, both inferential statistics and descriptive statistics were utilized.

## 4. Results

To answer the first research question about the effect of LOA-based self-assessment, peer-assessment, and teacher assessment approaches on the CAF (complexity, accuracy, and fluency), MANCOVA was run. The treatment variable (LOA-based self-assessment, LOA-based peer-assessment, LOA-based teacher-assessment, and control) was found to be highly significant throughout their multivariate tests (Pillai's Trace: .674,  $F(9, 345) = 11.11$ ,  $p < 0.001$ , partial  $\eta^2 = 0.23$ ). Thus, the assessment method type does exert influence on the learners' CAF scores. Partial Eta Squared values (varying from .225 to .641), direct substantial evidence that treatment does account for a very considerable variance in CAF, with Roy's Largest Root yielding the strongest effect (Partial Eta Squared = 0.641). The MANCOVA results indicate that structured assessment methods (LOA-based peer-assessment, LOA-based self-assessment, and LOA-based

teacher-assessment) significantly improve EFL learners' writing complexity, accuracy, and fluency (CAF) as compared to no structured assessment (the control group).

LOA-based peer-assessment seems to be the most efficient type, while LOA-based teacher-assessment is next and LOA-based self-assessment last.

**Table 3.** Descriptive Statistics

	Treatment	Mean	Std. Deviation	N
Accuracy	LOA-based self-assessment	11.6667	2.64358	30
	LOA-based peer-assessment	13.4333	1.95965	30
	LOA-based teacher-assessment	12.1000	2.41190	30
	Control	10.2667	1.96404	30
	Total	11.8667	2.50691	120
Fluency	LOA-based self-assessment	17.8667	2.52891	30
	LOA-based peer-assessment	20.8000	2.95250	30
	LOA-based teacher-assessment	19.7000	2.66717	30
	Control	15.5000	1.77628	30
	Total	18.4667	3.20172	120
Complexity	LOA-based self-assessment	1.4477	0.25206	30
	LOA-based peer-assessment	1.6283	0.19279	30
	LOA-based teacher-assessment	1.4967	0.19886	30
	Control	1.2513	0.21815	30
	Total	1.4560	0.25349	120

**Table 4.** Multivariate Tests<sup>a</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	0.660	73.245 <sup>b</sup>	3.000	113.000	0.000	0.660
	Wilks' Lambda	0.340	73.245 <sup>b</sup>	3.000	113.000	0.000	0.660
	Hotelling's Trace	1.945	73.245 <sup>b</sup>	3.000	113.000	0.000	0.660
	Roy's Largest Root	1.945	73.245 <sup>b</sup>	3.000	113.000	0.000	0.660
Pre-test	Pillai's Trace	0.667	75.381 <sup>b</sup>	3.000	113.000	0.000	0.667
	Wilks' Lambda	0.333	75.381 <sup>b</sup>	3.000	113.000	0.000	0.667
	Hotelling's Trace	2.001	75.381 <sup>b</sup>	3.000	113.000	0.000	0.667
	Roy's Largest Root	2.001	75.381 <sup>b</sup>	3.000	113.000	0.000	0.667
Treatment	Pillai's Trace	0.674	11.114	9.000	345.000	0.000	0.225
	Wilks' Lambda	0.347	16.649	9.000	275.163	0.000	0.297
	Hotelling's Trace	1.819	22.569	9.000	335.000	0.000	0.377
	Roy's Largest Root	1.784	68.400 <sup>c</sup>	3.000	115.000	0.000	0.641

a. Design: Intercept + pre + treatment

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level

**Table 5.** Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Accuracy	535.504 <sup>a</sup>	4	133.876	72.497	0.000	0.716
	Fluency	782.005 <sup>b</sup>	4	195.501	51.346	0.000	0.641
	Complexity	2.216 <sup>c</sup>	4	0.554	11.735	0.000	0.290
Intercept	Accuracy	4.495	1	4.495	2.434	0.121	0.021
	Fluency	264.904	1	264.904	69.574	0.000	0.377
	Complexity	7.592	1	7.592	160.783	0.000	0.583
Pre-test	Accuracy	382.237	1	382.237	206.992	0.000	0.643
	Fluency	298.205	1	298.205	78.320	0.000	0.405
	Complexity	0.017	1	0.017	0.363	0.548	0.003
treatment	Accuracy	182.844	3	60.948	33.005	0.000	0.463
	Fluency	537.160	3	179.053	47.027	0.000	0.551
	Complexity	2.167	3	0.722	15.297	0.000	0.285
Error	Accuracy	212.363	115	1.847			
	Fluency	437.862	115	3.807			
	Complexity	5.430	115	0.047			

a. R Squared = 0.716 (Adjusted R Squared = 0.706)

b. R Squared = 0.641 (Adjusted R Squared = 0.629)

c. R Squared = 0.290 (Adjusted R Squared = 0.265)

To investigate the possible influence of LOA-based peer-assessment, LOA-based self-assessment, and LOA-based teacher assessment methodologies on the EFL learners' accuracy, fluency, and complexity (CAF) in writing, MANCOVA analysis was run. The overall model was statistically significant on all three dependent variables: accuracy ( $F(3, 115) = 33.01, p < 0.001$ ), fluency ( $F(3, 115) = 47.03, p < 0.001$ ), and complexity ( $F(3, 115) = 15.30, p < 0.001$ ). Thus, it indicates that the model, which has as an independent variable the treatment (assessment methods), is powerful to explain variance in learners' scores in CAF.

The treatment variable has a significant influence on all components of CAF, thus indicating that the type of assessment method meaningfully influences the level of writing performance; LOA-based peer-assessment would probably have the strongest effect, followed by LOA-based teacher-assessment and LOA-based self-assessment.

The controlled group has lower performance than the informal assessment in all three CAF components. Simply put, the structured assessment methods yielded more increases in writing accuracy, fluency, and complexity than did the unstructured assessment methods (control group) among EFL learners. The most effective method mentioned is peer-assessment, especially in improving fluency and accuracy.

Thus, it clearly shows the importance of structured assessment methods in EFL writing instruction aimed at improving learners' CAF.

To answer the second research question addressing any significant difference among the impacts of LOA-based self-assessment, LOA-based teacher assessment, and LOA-based peer-assessment approaches on the writings of EFL learners across gender, a two-way ANOVA was run.

There is no significant interaction between treatment and gender ( $F = 0.893, p = 0.447$ ), meaning that writing performance assessment methods did not affect male and female learners differently.

In other words, it would be safe to say that effectiveness does not discriminate between female and male students with respect to LOA-based self-assessment, LOA-based peer-assessment, and LOA-based teacher-assessment.

The analysis of variance confirms that although the assessment method (treatment) significantly influences EFL learners' writing performance, the effects are not significantly different across the genders. This means that LOA-based self-assessment, LOA-based peer-assessment, and LOA-based teacher assessment have created similar learning pathways for male and female learners.

The two-way ANOVA results reject interaction, which suggests that gender does not influence the effectiveness of these assessment methods. On the whole, the evidence shows that the assessment methods were important for improving writing performance regardless of the gender of the learners.

**Table 6.** Descriptive Statistics of Learners' Post-test Score across Gender

Treatment	gender	Mean	Std. Deviation	N
LOA-based self-assessment	1.00	2.2317	0.17816	12
	2.00	2.3044	0.17628	18
	Total	2.2753	0.17768	30
LOA-based peer-assessment	1.00	3.1346	0.20955	13
	2.00	3.0618	0.17636	17
	Total	3.0933	0.19152	30
LOA-based teacher-assessment	1.00	2.2592	0.19774	12
	2.00	2.3533	0.15556	18
	Total	2.3157	0.17669	30
Control	1.00	1.5038	0.28611	13
	2.00	1.5518	0.29505	17
	Total	1.5310	0.28720	30
Total	1.00	2.2838	0.63322	50
	2.00	2.3181	0.56774	70
	Total	2.3038	0.59354	120

**Table 7.** Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	36.804 <sup>a</sup>	7	5.258	115.043	0.000
Intercept	616.421	1	616.421	13487.82	0.000
Treatment	36.374	3	12.125	265.301	0.000
Gender	0.037	1	0.037	0.803	0.372
treatment * gender	0.122	3	0.041	0.893	0.447
Error	5.119	112	0.046		
Total	678.840	120			
Corrected Total	41.923	119			

a. R Squared = 0.878 (Adjusted R Squared = 0.870)

**Table 8.** Pairwise Comparisons

(I) treatment	(J) treatment	Mean Difference (I-J)	Std. Error	Sig. <sup>b</sup>	95% Confidence Interval for Difference <sup>b</sup>	
					Lower Bound	Upper Bound
LOA-based self-assessment	LOA-based peer-assessment	-0.830*	0.056	0.000	-0.981	-0.680
	LOA-based teacher-assessment	-0.038	0.056	1.00	-0.190	0.113
	control	0.740*	0.056	0.000	0.590	0.891
LOA-based peer-assessment	LOA-based self-assessment	0.830*	0.056	0.000	0.680	0.981
	LOA-based teacher-assessment	0.792*	0.056	0.000	0.641	0.942
	control	1.570*	0.056	0.000	1.421	1.720
LOA-based teacher-assessment	LOA-based self-assessment	0.038	0.056	1.00	-0.113	0.190
	LOA-based peer-assessment	-0.792*	0.056	0.000	-0.942	-0.641
	control	0.778*	0.056	0.000	0.628	0.929
control	LOA-based self-assessment	-0.740*	0.056	0.000	-0.891	-0.590
	LOA-based peer-assessment	-1.570*	0.056	0.000	-1.720	-1.421
	teacher-assessment	-0.778*	0.056	0.000	-0.929	-0.628

Based on estimated marginal means

\*. The mean difference is significant at the .05 level

b. Adjustment for multiple comparisons: Bonferroni

The comparisons between pairs confirm that LOA-based self-assessment, LOA-based peer-assessment, LOA-based teacher-assessment, and control have all been significantly different concerning EFL learners' writing performance. LOA-based peer assessment was significantly higher than LOA-based self-assessment (mean difference = -0.830,  $p = 0.000$ ) and LOA-based teacher assessment (mean difference = 0.792,  $p = 0.000$ ); thus, LOA-based peer assessment was rated as the best technique. Furthermore, LOA-based peer-assessment surpassed controls in a significant margin mean difference = 1.570 ( $p = 0.000$ ). LOA-based self and LOA-based teacher assessed groups performed similarly and they are not significantly different from each other (mean difference = -0.038,  $p = 1.00$ ), but both do outperform the control group with significant mean differences (LOA-based self-assessment vs. control: mean difference = 0.740,  $p = .000$ ; LOA-based teacher-assessment vs. control: mean difference = 0.778,  $p = 0.000$ ). Hence these

methods measure LOA-based peer assessment to be the most effective method but show that both LOA-based self and LOA-based teacher assessment are indeed better than no structured assessment. All three assessment groups egregiously outperformed the unassessed control in what they produced, indicating that structured assessment even matters in EFL writing instruction. The figures back up the data showing that from a pair-wise comparison and the ANOVA, peer-assessment was rated the best option, with LOA-based teacher assessment being the second-best option, and LOA-based self-assessment having the least positive rating, whereas the control group fared a lot worse. The consistent trends across genders further verify that the influence of different assessment methods would be almost similar for male and female learners. In total, such findings point out the great contribution of structured assessment methods, especially LOA-based peer assessment, to improving EFL learners' writing performance.

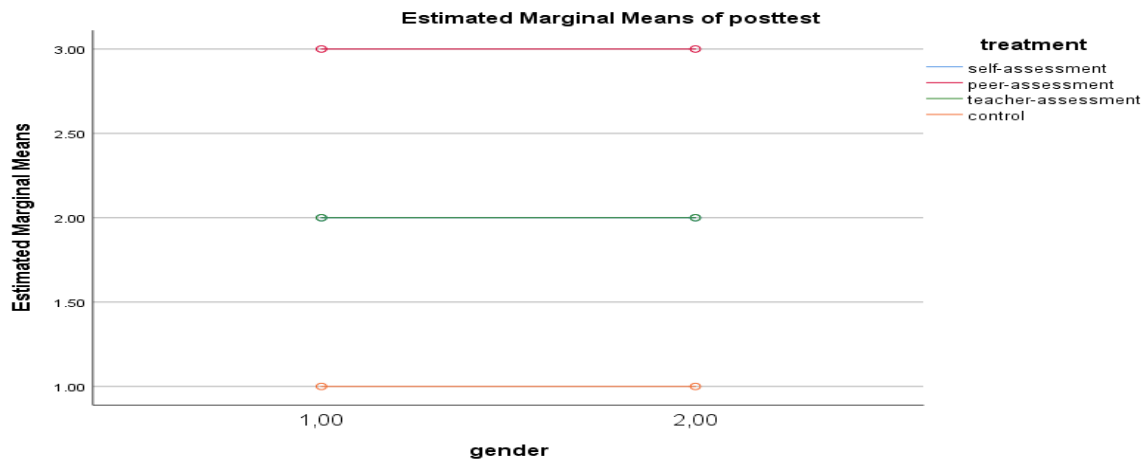


Figure 3. Estimated Marginal Means of Post-test regarding Treatment

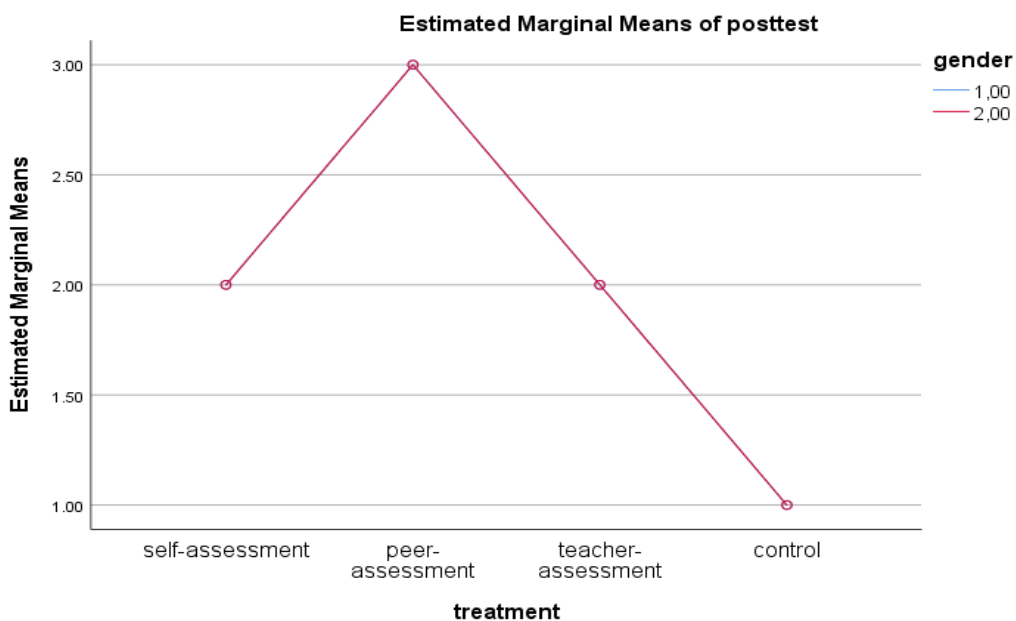


Figure 4. Estimated Marginal Means of Post-test regarding Gender

## 5. Discussion

The present study investigated the impacts of LOA-based teacher, peer, and self-feedback on Iranian EFL learners' writing performance with an emphasis on overall writing quality as well as the CAF dimensions—complexity, accuracy, and fluency. Compared with the control group, learners' writing performance was significantly improved by all three LOA-based interventions, as indicated by quantitative analyses, with peer evaluation producing the greatest improvement. By interpreting these findings using the LOA framework, which emphasizes assessment *as* and *for* learning (Carless, 2015; Purpura & Turner, 2014), the study shows that feedback is not just evaluative but also transformative. It turns into an educational resource that boosts learner autonomy, linguistic accuracy, and metacognitive awareness. Among the three interventions, peer assessment yielded the most substantial progress because it transforms assessment into a socially negotiated learning activity. In line with dialogic feedback theory (Zhang & Hyland, 2022), peer interaction allows learners to co-construct meanings, compare linguistic output, and adopt multiple perspectives on audience awareness—all of which contribute to enhanced textual complexity and idea development. The dynamic feedback exchanges characteristic of LOA-based peer review stimulate metacognitive reflection, which strengthens fluency as learners articulate their reasoning in meaningful contexts (Sato & Loewen, 2017). Furthermore, the reciprocity of the peer feedback process nurtures feedback literacy, heightening sensitivity to language form and function. With the highest post-test mean score and the largest improvements in CAF, especially in accuracy and fluency, quantitative analysis showed that LOA-based peer-assessment was the most successful intervention. The large effect sizes validated the significant impact of peer interaction on writing improvement. This result is supported by recent LOA-based research that highlights the dialogic and social aspects of feedback (Sato & Loewen, 2017; Zhang & Hyland, 2022). LOA's principles of dialogic feedback and shared responsibility are reflected in the feedback dialogues, negotiated meaning, and internalized assessment criteria that learners undertook through peer feedback (Carless, 2015). LOA-based teacher feedback contributed to the improvement of writing mainly through expert-mediated scaffolding. From a sociocultural perspective (Vygotsky, 1978), teacher responses act within learners' zones of proximal development to improve linguistic accuracy and syntactic control, two important indicators of accuracy and complexity aspects of CAF. As proposed by LOA, focused and interactive teacher feedback facilitates the noticing and hypothesis testing about linguistic forms (Wang & Zhang, 2020). When learners moved from error

correction to self-regulation, their grammatical accuracy improved, cognitive resources were freed, and fluency improved. Compared to LOA-based teacher or LOA-based peer assessment, LOA-based self-assessment produced notable but less measurable improvements. Although students in this group improved in all CAF components in comparison with the control group, their progress was most modest in accuracy and fluency. This is in line with the findings of Ma & Winke, (2019) and Liu & Brantmeier (2019), who noted that learners' metacognitive and linguistic knowledge significantly influences the results of self-assessment. LOA-based self-assessment involved learners in self-regulation and metacognitive monitoring as fundamental principles of LOA. As writing develops, the ability to identify weaknesses and set immediate goals increases fluency and lexical complexity over time (Ma & Winke, 2019).

The observed increases in CAF can be theoretically explained by the LOA learning mechanism. Interactive and reflective tasks increase complexity as students move toward deeper syntactic and lexical development. Accuracy improves when attention is drawn to language form and form-function relationships through formative feedback from teachers, peers, or oneself. Fluency increases through repeated writing cycles and reduced cognitive load as students internalize quality standards and automate aspects of writing (Skehan, 2009). Therefore, LOA influences CAF indirectly through increased metacognitive awareness and directly through feedback practices that make writing a continuous developmental process. Moreover, according to Rahmani et al. (2020), an inconsistency in CAF development can imply some conceptualizations: first, it recognizes the premise that CAF is multilayered and multifaceted, as multiple levels need to be developed through different attention levels and different teaching types. Second, the development of one layer does not necessarily lead to the development of others. Third, the components of CAF have different difficulty levels among EFL learners.

Both genders gained feedback literacy—the ability to comprehend and apply feedback effectively—through LOA-based feedback cycles (Carless & Boud, 2018). While male students prioritized task mastery and self-improvement, female students frequently highlighted the relational, supporting feature of feedback. Both genders support LOA's commitment to agency, reflection, and development in spite of these divergent emphases. The lack of notable gender differences suggests that LOA reduces typical classroom injustices by acting as an equalizing framework. Its collaborative and dialogic principles guarantee that learning processes, not demographic characteristics, determine results. All students can equally engage in the co-construction of knowledge in gender-inclusive learning environments created by LOA through the integration of feedback as a

shared, reflective activity. Similar to previous studies by Dalrymple and Smith (2008), the study's findings on a different LOA task were similar in that it provides students with an enhanced experience of participating actively through patchwork text. Additionally, the outcomes of this study aligned with other research studies that evaluated the effectiveness of portfolio evaluation in writing (Er & Farhady, 2023; Eridafithri, 2015; Farahian & Avarzamani, 2018; Lam, 2019; Romova tandritter, 2011). All of these studies recognized the benefits of holding portfolios for academic writing, particularly those related to reflectivity, peer collaboration, and feedback loops. In portfolio evaluation, self-reflection (Lam, 2019) and monitoring by yourself are the key factors. Students can gain more independence and responsibility through the use of portfolios (Arslan, 2014; Eridafithri, 2015). Hence LOA is essential and should be used to help promote quality learning especially in higher education.

## 6. Conclusion

Investigating the effects of LOA-based self-, peer-, and teacher-feedback on the CAF dimensions—complexity, accuracy, and fluency, of Iranian EFL learners, was the main aim of the current study. The findings indicated that the students who got LOA-based peer feedback in writing teaching and assessment had better writing skills in comparison to students in other groups. The students in the experimental group felt better and had more self-esteem in their writing projects, both inside and outside of the classroom. The writing assignments and their peers' feedback did not scare them. They started writing with more assurance and enthusiasm for the assignment. They demonstrated more powerful abilities to revise their written work and use more acceptable language patterns to correct their disorganized writing. Additionally, they improved as both givers and recipients of feedback. They actively gave and received feedback from their peers without losing motivation. They also made an effort to remember their mistakes and used the feedback to work on and improve their performance in the future. Finally, they were far better at working together with their peers. Since they discovered that working in groups and fostering social collaboration are more effective ways to improve writing vocabulary and grammar, they preferred working with peers and in groups over working alone. The findings drew our attention to more applications of LOA in L2 writing classes, especially as writing in L2 is a socially constructed, collaborative, and interactive activity. One of the essential components of LOA is student inclusion in evaluation, which can be achieved through peer and self-assessment. Since it effectively encourages students to evaluate their peers' language learning and allows them to participate in a collaborative evaluation using various viewpoints, peer performance

evaluation could be the main method of learning assessment. Even though the peer-revision group's writing was improved, this study doesn't claim that just having peer feedback was the reason for those results. The results show that learning environments based on LOA, which included collaboration, feedback, and reflection, were linked to better writing skills. The findings of this study hold some educational value. It is necessary for language teachers to gain a deep understanding of the basic principles of LOA and to allow students enough time to participate in the evaluation process to apply LOA effectively in their courses. Secondly, students need to have a complete understanding of the structure, goals, and assessment criteria of LOA. Additionally, they must recognize that LOA tasks are complex and demand active engagement. Fourth, the school administration needs to recognize that focusing too much on writing scores is against the basic ideas of LOA in L2 writing classes. LOA aims to speed up the students' development in writing skills by informing them about the sources of their errors and motivating them to take advantage of their peers' help. This situation shows that its formative nature is in sharp contrast with the summative nature of traditional methods that rely on scores.

### Authors Contribution

All the authors have participated sufficiently in the intellectual content, conception, and design of this work or the analysis and interpretation of the data (when applicable), as well as the writing of the manuscript.

### Availability of data and materials

The data that support the findings of this study are available from the corresponding author upon reasonable request.

### Conflict of interest

The author states that there is no conflict of interest.

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## Appendix

### Fresno Scoring Guide for Writing

Scoring Level	Knowledge of Conventions	Clarity and Coherence	Rhetorical Choices
4- Accomplished	Besides meeting the requirements for a "3," the writing is essentially error-free in terms of mechanics, models, style, and format appropriate to the assignment.	In addition to meeting the requirements for a "3," writing flows smoothly from one idea to another. The writer has taken pains to assist the reader in following the logic of the ideas expressed.	In addition to meeting the requirements for a "3," the writer's decisions about focus, organization, style/tone, and content made reading a pleasurable experience. Writing could be used as a model of how to fulfill the assignment.
3 -Competent	While there may be minor errors, the paper follows normal conventions of spelling and grammar throughout and has been proofread. Appropriate conventions for style and format are used consistently throughout the writing sample. Demonstrates thoroughness and competence in documenting sources; the reader would have little difficulty referring back to cited sources.	Sentences are structured, and words are chosen to communicate ideas. The sequencing of ideas within paragraphs and transitions between paragraphs makes the writer's points easy to follow.	The writer has made the right decisions about focus, organization, style/tone, and content to communicate clearly and effectively. The purpose and focus of the writing are clear to the reader, and the organization and content achieve the purpose well. Writing follows all the requirements for the assignment
2-Developing	Frequent errors in spelling, grammar (such as subject/verb agreements and tense), sentence structure, and/or other writing conventions distract the reader. Writing does not consistently follow the appropriate style and/or format. Source documentation is incomplete. It may be unclear which references are direct quotes and which are paraphrased	Sentence structure and/or word choice sometimes interfere with clarity. Needs to improve the sequencing of ideas within paragraphs and transitions between paragraphs to make the writing easy to follow	The writer's decisions about focus, organization, style/tone, and/or content sometimes interfere with clear, effective communication. The purpose of writing is not achieved. All requirements of the assignment may not be fulfilled.
1-Beginning	Writing contains numerous errors in spelling, grammar, and/or sentence structure that interfere with comprehension. Style and/or format are inappropriate for the assignment. Fails to demonstrate thoroughness and competence in the documentation.	Sentence structure, word choice, lack of transitions, and/or sequencing of ideas make reading and understanding difficult.	The writer's decisions about focus, organization, style/tone, and/or content interfere with communication. The purpose of writing is not achieved. Requirements for the assignment have not been fulfilled.

### Response to reviewers

The revised text is highlighted in yellow in the blind manuscript.

### Comment: Fundamental Design Flaw: Confounded Variables

The three experimental groups differed not only in the *revision agent* (peer/self/teacher) but also in the **total**

**amount and type of activities** they performed. The peer-revision group engaged in substantially more collaborative tasks (computer-mediated writing, team projects, in-class peer feedback) compared to the self-revision group. This makes it impossible to determine whether observed effects resulted from the revision agent itself or from increased task exposure/collaboration opportunities.

Response: Thank you for your invaluable suggestion. There were some mistakes regarding the wording. We modified the related sections to align with your suggestion.

**Comment: Invalid Pre-test/Post-test Comparison**

The pre-test prompt ("Why I decided to major in English") and post-test prompt ("impact of social media on students' daily lives") differed substantially in:

--Topic familiarity (students had personal investment in their major choice)

--Cognitive demand (social media analysis requires different skills)

--Cultural relevance This introduces a serious confounding variable that threatens internal validity—performance differences may reflect topic characteristics rather than intervention effects.

Response: We applied your comment. In the data gathering process, we gathered a variety of data for different purposes. Fortunately, the following topics were used in our study:

**Pre-test:** *“Advantages and disadvantages of using technology in university learning.”*

**Post-test:** *“Effects of technology on students’ study habits*

**Comment: Problematic Sampling and Generalizability**

--**Convenience sampling** from a single university branch limits external validity

--**Unequal gender distribution** (50 males vs. 70 females) with uneven allocation across treatment groups (e.g., peer-revision group had 13 males/17 females) compromises the gender analysis

--Homogeneous sample (all BA sophomores at intermediate level) prevents generalization to other proficiency levels or educational contexts

Response: Based on your comment, we added a sentence to caution the generalizability and interpretation of the findings. We explicitly acknowledged the imbalance in gender distribution.

**Comment: Inadequate Description of the Control Group**

The control group received vaguely defined “routine procedures,” with no clear information about instructional time equivalence, feedback quality/quantity, or formative assessment.

Response: Thank you for highlighting this critical issue. We have revised the Method section to clearly

differentiate the control group from the experimental groups.

**Comment: Statistical Concerns (Use of Pre-test as Covariate, Scoring Inconsistencies, Assumptions)**

Response: We appreciate these detailed statistical observations and have addressed them. The apparent discrepancy in score ranges reflects differences in the measurement scale rather than inconsistency or error. [Tables 3 and 5](#) report raw component scores for accuracy, fluency, and complexity used in the MANCOVA analyses, whereas [Table 6](#) reports standardized composite post-test scores used for the gender-based ANOVA to allow comparability across CAF components.

**Comment: Implementation Fidelity and Teacher Effects**

No evidence of teacher training, fidelity checks, or control for teacher effects; the feasibility of the intensive 12-week intervention is questionable.

Response: We agree that implementation fidelity is essential. In response, we have clarified that the same instructor taught all four groups, minimizing teacher effects, as well as added that the instructor received prior training in LOA principles and followed a unified syllabus.

**Comment: Theoretical and Cultural Oversights**

The study overlooks L1 writing conventions, Iranian educational culture, and relies heavily on Western LOA frameworks.

Response: We thank the reviewer for drawing attention to this important contextual dimension. We made modifications as suggested.

**Comment: Overstated Conclusions about Peer Assessment**

The claim that peer assessment is the most effective method ignores confounds, as peer groups received more collaborative practice.

Response: We agree with this concern and have revised the methodological framing to avoid over-attribution.

**Comment: Ethical and Practical Concerns**

No mention of ethical approval, informed consent, potential negative effects, or cost-benefit considerations.

Response: We appreciate this reminder. The revised manuscript now includes the suggested points.

Comment: The title is too vague. A more specific, clear title is recommended to indicate who will receive the LOA. I suggest: "The Impact of LOA-Based Revision Strategies on Writing CAF of Iranian EFL learners: Gender in Focus"

Response: We appreciate your suggestion and followed it.

Comment: The abstract lacks the necessary information and is too short.

Response: Based on your comment, we added sentences to the abstract.

Comment: The article needs revisions to improve the writing style and mechanics. APA format must be followed when reporting statistics. The appendix is missing.

Response: We appreciate this reminder. The revised manuscript now includes the suggested points.

Comment: Please revise the discussion and the literature review, as they do not address the significance of gender as the study's focus

Response: We appreciate your suggestion and followed it.

Comment: The literature review misses many important and recent studies on LOA.

Response: We appreciate this reminder. We added the suggested reference.

Comment: The discussion section should avoid repeating the results; instead, it should focus on the theories that support the study. The authors' assumptions about why LOA could enhance writing and writing CAF are missing. Writing CAF is not explicitly discussed. The discussion should incorporate theories on how CAF appears in learners' writing abilities.

Response: We agree with this concern and have revised the discussion section as suggested.

Thank you for this important observation. The apparent discrepancy in score ranges reflects differences in the measurement scale rather than inconsistency or error. [Tables 3 and 5](#) report raw component scores for accuracy, fluency, and complexity used in the MANCOVA analyses, whereas [Table 6](#) reports standardized composite post-test scores used for the gender-based ANOVA to allow comparability across CAF components.

We are grateful to the reviewer for these constructive comments, which have substantially strengthened the methodological rigor, contextual sensitivity, and transparency of the study. We believe that the revised manuscript now presents a more balanced, defensible, and clearly contextualized investigation of LOA-based revision strategies in EFL writing.