



The effects of mediation and corrective feedback on L2 writing development

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Abstract

This study explored the effects of Mediation-based Feedback and Direct Corrective Feedback on the linguistic accuracy and rhetorical development of EFL university students' writing. A quasi-experimental design involved two L2 writing classes (mediation group vs. correction group), each receiving feedback across three writing tasks: pre-test, post-test, and delayed post-test. The mediation group received dialogic, adaptive mediation aligned with learners' Zones of Proximal Development, while the correction group received teacher-led direct corrections. Quantitative analyses revealed that the mediation group outperformed the correction group in linguistic accuracy, with statistically significant differences and a large effect size. Within-group comparisons showed that mediation led to moderate improvements in linguistic accuracy, while direct corrective feedback produced small yet meaningful gains. No significant between-group differences were found for rhetorical development; however, direct corrective feedback yielded sustained medium effect size gains, while the mediation group demonstrated initial progress that regressed over time. The study contributes to research on feedback by highlighting the benefits and limitations of mediation and correction in L2 writing development.

Keywords: *Correction; direct corrective feedback; dynamic assessment; L2 writing; mediation.*

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Introduction

The initial aim of this study relies on the recent call within Second Language Acquisition (SLA) research, especially in L2 writing, to employ learner-responsive and social interaction-oriented feedback methodologies (Mao & Lee, 2020; Storch, 2018). Feedback has always been an important part of language development, particularly in L2 writing; therefore, how to deliver feedback has always been the focus of many scholarly studies, which have found that Corrective Feedback (CF) has led to improvement in L2 writing. However, it has not been clear which CF type might lead to better improvement due to the variety in learner profiles in these studies (Bitchener & Storch, 2016; Mao et al., 2024; Nassaji, 2017). Also, CF-oriented studies have been criticized on two grounds: the lack of dialogic interactions between teachers and learners during offering CF and the lack of personalized and adaptive feedback aligned with learners' needs across an implicit-explicit feedback loop.

Regarding these gaps, scholars have advocated for the integration of the sociocultural approach in L2 writing research (Lee, 2020; Storch, 2018). Sociocultural Theory (SCT) proposes a crucial theoretical framework that reconceptualizes feedback as a dialogic and mediated process, in contrast to unidirectional correction. Drawing on the SCT, Dynamic Assessment (DA), with its mediation-oriented nature, has gained prominence with a feedback form that is fine-tuned, responsive, and relies on progress (Poehner, 2008).

Despite the increase in studies comparing CF types, few have compared DA-based mediation and Direct Corrective Feedback (DCF) in L2 writing classrooms and relied on both linguistic and rhetorical improvement across time. Most studies have either explored these approaches in isolation or investigated linguistic accuracy without examining rhetorical dimensions, such as organization, cohesion, and coherence. This study aims to focus on this gap and to evaluate the short-term and long-term effects of mediated feedback and direct corrective feedback on the writing improvement of university-level EFL learners in a classroom-based quasi-experimental design. One group received Interactive DA, which was tailored to each learner's immediate needs during dialogic interactions, while the other group received unfocused DCF. The linguistic accuracy and rhetorical quality of writing were assessed over time across three writing tasks through both within-group and between-group comparisons. For that purpose, we adopted an analytical rubric, the TEEP (Test in English for Educational Purposes) developed by Weir (1990), since it might offer an established framework for assessing writing quality under key attributes. Accordingly, the linguistic accuracy was measured using grammar, vocabulary, spelling, and mechanics scores. At the same time, the rhetorical quality was assessed with text organization, content, and idea generation, and coherence among sentences. Relying on an ecologically valid research design, this study aims to contribute to the literature by examining the impact of two feedback approaches across writing performances, investigating the transfer effect of learning from feedback to new tasks, and offering empirical evidence on the settings where mediation and/or correction trigger writing both linguistically and rhetorically.

Literature review

Theoretical and empirical perspective of corrective feedback in L2 writing

Managing learners' errors and offering feedback have long captured the attention of educators and researchers due to the recognized importance of feedback as a fundamental element in effective instruction and as a key contributor to enhancing learners' motivation (Ferris, 2006; Lyster & Ranta, 1997), and CF encompasses explicit and/or implicit methods employed by instructors to address learners' errors, whether in oral or in written form (Nassaji & Kartchava, 2017a).

Written corrective feedback (WCF) has various features: it can be provided later, which might reduce L2 writers' cognitive load; its written form may help L2 learners to review it whenever they want; and it includes feedback on both linguistic and rhetorical dimensions of texts, such as organization, content, and coherence (Sheen, 2007). WCF encompasses diverse methods, such as direct/indirect feedback, metalinguistic cues, focused/unfocused approaches, and reformulation (Ellis, 2009). Research has mainly compared different WCF types to decide which enhances better text revision (e.g., Alshahrani & Storch, 2025; Bitchener, 2008; Bitchener & Knoch, 2010; Bitchener et al., 2005; Boggs, 2019; Kim & Li, 2024; Lyster, 2004; Mawlawi Diab, 2015; Sheen, 2007; Shintani & Ellis, 2013). However, a conclusive decision regarding which WCF type facilitates accuracy is not evident, although DCF is acknowledged as a more effective WCF method in some studies (Lim & Renandya, 2020; Lyster, 2015).

DCF involves error correction to learners, which can help them notice the difference between their inaccurate output and accurate input, and therefore facilitates language development (Nassaji & Kartchava, 2017b). Specifically, low-proficiency learners may benefit particularly from DCF because they might face difficulties in understanding and handling indirect CF by themselves (Bitchener, 2017; Lim & Renandya, 2020). Thanks to this support, this study employed DCF as a comparative feedback method to mediation-based feedback, targeting low-intermediate learners.

Another important topic regarding CF studies is feedback scope, which is divided into focused (targeting specific linguistic errors) or unfocused (addressing all linguistic errors) CF (Ellis, 2009). Results of the studies based on feedback scope are diverse; some studies present a supportive approach to focused CF approach (Sheen, 2007), while others criticize it as focused CF may not address learners' various errors and needs (Lee, 2020). For instance, Kao et al. (2025) compared content-only feedback with unfocused corrective feedback plus content feedback in detail in an L2 writing class. The results indicated that unfocused corrective feedback improved grammatical accuracy, specifically in the use of English articles. Also, the authors stated that the explicitness of the feedback might improve grammatical accuracy across time, which aligns with Mujtaba and Singh's (2025) study. Also, the participants, EFL learners, expressed that they liked the explicitness of the feedback provided (Alshahrani & Storch, 2025). Meta-analyses by Mao and Lee (2020) suggest that conducting CF studies in real-

classroom contexts could help explain the controversial results on the issue of feedback scope. Therefore, this study utilized unfocused DCF in a real classroom context, allowing a holistic view of learner performance and offering the opportunity to compare findings with those obtained through mediation-based feedback.

In brief, despite the extensive research into DCF and its potential to enhance corrective force and L2 development, previous studies are characterized by a number of limitations that call for further research. These studies have often been limited to offering intensive CF on preselected topics over time, thus limiting the generalisability of findings across diverse writing tasks (Nassaji, 2016). Moreover, previous studies have often failed to notice learner differences and their different needs (Bitchener, 2017; Ferris, 2006; Ferris et al., 2013; Hyland & Hyland, 2006). In this regard, investigating the impact of unfocused DCF tailored to individual learner texts and investigating long-term and transfer effects are warranted (Mao et al., 2024; Storch, 2018). In this regard, this study adopted unfocused DCF with one group, targeting to deliver feedback to address linguistic errors and rhetorical problems in the participants' actual writing tasks in a real L2 writing course.

Sociocultural theory and dynamic assessment: A shift toward mediation-based feedback

Vygotsky's Sociocultural Theory (1978) places a much greater emphasis on the role of social interaction in shaping cognitive development; therefore, learning is assumed to be primarily mediated through interactions with others and culturally constructed tools. While unmediated exposure to stimuli can produce perceptual awareness, it is only when this exposure occurs during goal-directed, socially situated activities designed to trigger new ways of thinking and the internalization of higher mental functions that improvement takes on meaningful form and function (Feuerstein et al., 2010; Vygotsky, 1978). In this context, mediation is understood as the intentional and contingent support by a more knowledgeable individual to guide learners through their Zone of Proximal Development. This understanding constitutes the base for DA, which rests on the integration of assessment and instruction in a cooperative work through personalised and adaptive mediation and goes beyond mere error correction to foster ongoing development (Poehner, 2008).

A person's independent ability to solve problems refers to their Zone of Actual Development (ZAD), which might show their internalized competencies. By contrast, the Zone of Proximal Development (ZPD) is explained through the difference between what a person can do with and without guidance (Vygotsky, 1978). In this context, mediation represents the key method since it might display the learner's ZAD and ZPD. This process is dynamic and bidirectional, in which both the mediator and learner are active agents. The mediator assesses the learner's responsiveness, strengths, and needs while giving scaffolded feedback, which aligns with the learner's developmental stage (Aljaafreh & Lantolf, 1994). Such a dialogic approach also allows for the co-construction of knowledge and enables the mediator to monitor the learner's ZPD (Feuerstein et al., 2010).

Dynamic Assessment, aligned with Vygotsky's SCT (1978), has emerged as a learning-oriented assessment method, and it integrates instruction with assessment in a single collaborative work (Poehner, 2008; Poehner & Lantolf, 2005). Accordingly, it assesses learners' current and developing abilities, identifies challenges and needs, and, through dynamic reciprocal interaction, collaboratively works to scaffold learners' needs and reshape their ZPD for unassisted future performance (Davin, 2016; Poehner & Infante, 2016; Shrestha, 2020). Therefore, the core facets of DA encompass mediation, dialogic interaction, and ZPD, facilitating an assessment of cognition, learning perception, and problem-solving through an active teaching process aimed at enhancing cognitive functioning (Haywood & Tzuriel, 2002, p. 41).

The flow of dialogic interaction in DA sessions (Figure 1) relies on providing mediation-based feedback. Within that nature, mediation follows a graduated implicit-to-explicit feedback continuum: the teacher initiates with implicit mediation and progresses to more explicit forms when learners struggle to comprehend the source of errors and self-correct. Conversely, if the student fixes the error with the mediation provided, the teacher encourages verbalized reasoning to probe internal cognitive mechanisms (Poehner, 2008). Through this embedded instruction-assessment process, DA can predict future task performance, as seen through improved accuracy in subsequent tasks and alterations in the nature and extent of mediational prompts, directly linked to an individual's learning potential aligned with the ZPD (Poehner & Infante, 2017; Poehner & Lantolf, 2005; Storch, 2018; Tzuriel & Shamir, 2002). Unlike traditional feedback models that operate post-performance and focus on error correction, DA is forward-looking and developmental in nature.

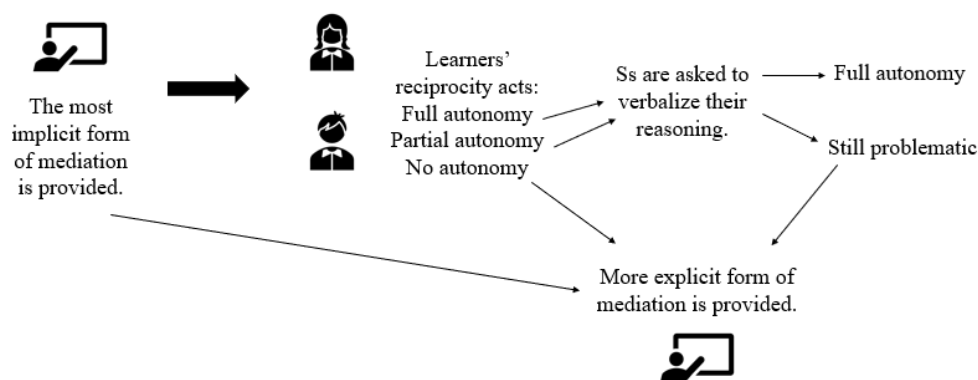


Figure 1. *A Sample Flow of Dynamic Assessment.*

Research on the application of DA in L2 writing primarily used qualitative designs and small sample sizes, making generalizations difficult (Herazo et al., 2019; Poehner et al., 2018; Rahimi et al., 2015). Some studies focused on specific linguistic aspects (Poehner & Infante, 2019; Poehner & Leontjev, 2018). Shabani (2018) used mixed-methods interactionist DA in writing courses, and Xian (2020) explored online interventionist DA for language accuracy, but neither investigated the longitudinal effects of DA. This study adopted a quasi-experimental design with an aim to compare mediation-based feedback and direct corrective feedback across

three parallel writing tasks, by investigating both the linguistic accuracy and rhetorical improvement over time.

Mediation versus Correction in L2 writing

In this part, we aimed to present relevant studies that explored the comparative effect of mediation versus correction in L2 writing, and there was only one study (Ajabshir, 2024) on this ground. Thus, we also searched for studies that investigated the comparative effect of negotiated feedback and corrective feedback. Negotiated feedback primarily focuses on solving communication breakdowns and guiding learners to understand through negotiation of form or meaning (Nassaji, 2011), without analyzing and tracking the learner's underlying conceptual development. By contrast, mediation-based feedback, grounded in the SCT and DA, views learning as a collaborative and co-constructed process involving learners and more skilled peers, teachers, or parents. In this regard, this approach focuses on the diagnosis of the learner's independent skills as well as the provision of fine-tuned and graduated support to enhance their self-regulation. It is important to address the underlying reasons of learner errors and encourage them to verbalize their inner thoughts while treating errors (Poehner, 2008). Therefore, although interaction is a common point in both methods, mediation goes beyond error correction through interaction, as in negotiated feedback, but mediation gives importance to the evaluation and enhancement of the potential cognitive growth of learners.

Two previous studies compared the impact of direct error correction with negotiated feedback in L2 writing, focusing on specific linguistic forms, such as English articles and prepositions (Nassaji, 2011) and simple past tense and articles (Erlam et al., 2013). The results of these studies were diverse. Accordingly, learners' improvement in the predefined linguistic forms was fostered through negotiated feedback, while direct error correction also enhanced development. Ajabshir's (2024) study, which assessed DA and DCF in an online learning platform targeting second language pragmatic assessment, yielded the contrastive findings. The researcher compared three groups in detail, including teacher-led DA, peer-led DA, and teacher-led DCF. Also, the DA sessions utilized pre-defined feedback prompts, as in interventionist DA. The findings showed that the peer-led DA group outperformed, followed by the teacher-led DA group, and these results emphasized the crucial contributions of DA sessions.

While Ajabshir's (2024) study provides valuable information on how DA and DCF impact the pragmatics knowledge development of the participants, there are several questions that would warrant further investigation. In particular, the effect of these feedback methodologies on learners' ability to transfer their knowledge to new tasks has not been investigated. Also, the long-term impact of DA and DCF on learners' linguistic and rhetorical development has not been clearly explored in the related studies. Moreover, to our knowledge, there is a lack of studies in the literature that have focused on the adoption of interactionist DA in EFL writing classes. All these gaps in the relevant literature motivated us to collect data in a real L2 writing

classroom and compare mediation and direct error correction, examining their short and long-term impact on linguistic and rhetorical dimensions of writing.

Moreover, the comparative effects of unfocused feedback in both DCF and DA formats require more attention. Also, while DA offers a promising approach to support writing development, quantitative and classroom-based studies are still limited. Lastly, much of the existing research has not examined the longitudinal and transfer effects of feedback.

To address these gaps, the present longitudinal study investigated the effects of unfocused DCF and interactive DA on the writing performance of university-level EFL students, with a specific emphasis on linguistic accuracy and rhetorical development. By implementing the intervention in an L2 writing setting, this study aimed to provide a thorough comparison of the two feedback approaches. In this regard, the following main and sub-research questions prevail in this study:

RQ: What were the impacts of mediation and direct corrective feedback on university-level EFL students' writing performance in terms of linguistic accuracy and rhetorical development?

- To what extent did the two groups (mediation versus direct corrective feedback) differ in their post-test and delayed post-test scores for linguistic accuracy and rhetorical development?
- How did the students in each group (mediation versus direct corrective feedback) perform across three writing tasks (pre-test, post-test, delayed post-test) in terms of linguistic accuracy and rhetorical development?

Methodology

Participants

Data were collected from L2 writing classes at a state university in Türkiye. Of the 50 enrolled students, one dropped out and two opted out of participation, resulting in 47 volunteers. The participant pool included 36 female and 11 male students, with 20 female and 5 male students in the DA group (mediation) and 16 female and 6 male students in the DCF group (correction).

All participants were learning English in an EFL setting, including three immigrants: one from Syria (native languages Arabic and Kurdish) and two from Ukraine (native languages Ukrainian and Turkish). The remaining participants were Turkish. To ensure group equivalency in terms of language proficiency and writing competence, a writing pre-test, previously piloted, was administered to the groups at the beginning of the semester.

As the independent samples t-test showed in Table 1, the results did not yield a difference between groups (Mediation: $M=9.36$, $SD=3.59$; Correction: $M=7.81$, $SD=3.64$), $p=.15$, $t_{(45)}=$

1.45, in terms of linguistic accuracy. Similarly, the groups did not differ in terms of rhetorical aspects (Mediation: $M= 12.32$, $SD= 3.54$; Correction: $M= 11.18$, $SD= 3$), $p= .24$, $t_{(45)}= 1.19$. Therefore, both groups were assumed to be homogeneous low-intermediate language learners.

Table 1. *Independent Samples t-test.*

| | | N | Mean | SD | Mean Difference | t | df | p |
|---------------------|------------|----|-------|------|-----------------|------|----|-----|
| Total | Mediation | 25 | 21.68 | 6.39 | 2.68 | 1.50 | 45 | .13 |
| | Correction | 22 | 19 | 5.81 | | | | |
| Linguistic Accuracy | Mediation | 25 | 9.36 | 3.59 | 1.54 | 1.45 | 45 | .15 |
| | Correction | 22 | 7.81 | 3.64 | | | | |
| Rhetorical Aspects | Mediation | 25 | 12.32 | 3.54 | 1.13 | 1.19 | 45 | .24 |
| | Correction | 22 | 11.18 | 3 | | | | |

$p<.05$

Data collection procedure and instruments

This study used a quasi-experimental design (Creswell, 2012) to examine the short- and long-term effects of mediation and correction on EFL learners' writing skills with a sample of fifty students in L2 writing classes. Quasi-experiments are used when intact classes, groups, and participants are included in the study, so the participants are not randomly assigned. Despite the benefits of quasi-experiments involving intact participants in a natural experiment setting, it might threaten internal validity compared to true-experimental designs (Creswell, 2012). However, some pre-tests and statistical analyses could be conducted to ensure internal validity.

In this study, the school administration pre-assigned the students into two groups of twenty-five. Students with odd-numbered identifiers were placed in Group A (DA Group), while those with even-numbered identifiers were assigned to Group B (DCF Group). As in most classroom-based studies, the researchers did not interfere in assigning the students to groups. Yet, to ensure the internal validity and to have similar participants in both groups in terms of their writing skill, a pre-test was administered, and an independent samples t-test was conducted, which was mentioned under the previous title.

The data collection lasted 21 weeks and involved three parallel writing tests, at eight-week intervals, to test the longitudinal impact of mediation and correction on L2 writing. In the first week, participants were informed about the objectives of the study, emphasizing voluntary participation and ethical consent. This was followed by a distinction in the groups based only on the instructional approach the teacher took to address students' errors: mediation or unfocused direct CF. The former, mediation, was interactional, occurring dialogically in the course of dynamic interactions between the teacher and the students, within the process of addressing individual learner needs. The prompts progressed from an implicit to an explicit continuum depending upon the student's response, allowing for a goal-oriented dialogic process. By contrast, the other group involved an unfocused direct CF whereby the instructor

reviewed each paper and explicitly corrected errors by adding or crossing out morphemes, words, or phrases without any feedback or commentary.

From the second week onwards, the students attended their regular classes, and this research was part of their Writing Skills class, which was held for five hours a week. The syllabus was the same for both groups, and so was the teacher for both, with ten years of experience in English teaching. Every week, the students dealt with a different text from the coursebook, studying its genre while they did a close reading. They also reviewed relevant vocabulary, phrases, and structures. The teacher also provided the students with model texts of the same genre. Every week, after each class, the students were given the assignment to write a text on the genre and topic they had worked with in that week. The teacher held individual consultations with all participants. So, after they finished the assignment, each student went to the instructor's office either for mediation or correction. Each session within the mediation group lasted around 20 minutes, dealing with learners' errors and their responses to the feedback in an implicit-to-explicit loop during mediation, but the ones in the correction group lasted about 10 to 15 minutes during which the instructor provided direct corrective feedback by adding or removing morphemes, words, or phrases without accompanying commentaries or explanations. So, these individual sessions are important to underline the effects of mediation vs. correction on L2 writing, DA, and mediation creates a heuristic context, but direct CF provides explicit corrections.

In order to minimize the possible bias brought about by the dual role of the instructor, who is both a teacher and a researcher, several actions were taken. First, all written texts were anonymized before scoring so that the researcher could not identify individual students while evaluating their work. Second, an independent rater, who had not been directly involved in the instruction, was consulted in verifying a random sample of the ratings with a view to assessing inter-rater reliability. Third, the instructional and evaluative functions were kept separate: mediation and feedback sessions followed standard rubrics and protocols to ensure consistency and objectivity. These measures were meant to add credibility and validity to findings.

The courses and individual DA and direct CF sessions lasted ten weeks, followed by a post-test. We aimed to evaluate the short-term impacts of both methods by making comparisons between and within groups. Moreover, we aimed to present the long-term impact of mediation and correction. In this regard, participants took a delayed post-test eight weeks after the initial post-test, and during that interval, they did not take any mediation, correction, or instructional interventions. To display the study's structure, Figure 2 was provided, showing the research design, including group assignments, intervention timeline, writing tasks, and assessment points.

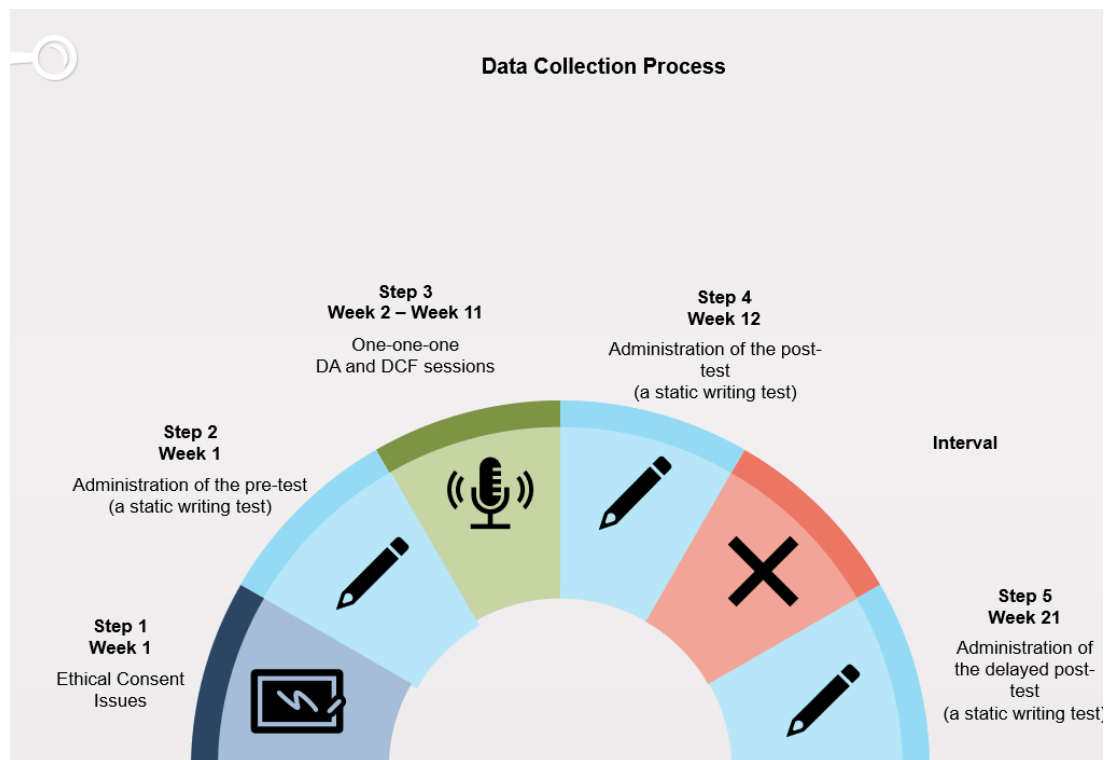


Figure 2. *The Data Collection Process.*

This study employed quantitative data collection tools. Data were collected using three parallel writing assessments developed by the first author. The examination items were based on the Preliminary English Tests designed by Cambridge University. Two experts reviewed these for content and piloted them for validity.

Regarding the validity, an analytic scoring rubric, the TEEP (Test in English for Educational Purposes) (Appendix A) that assigns writing scales developed by Weir (1990) both for rhetorical and linguistic aspects, was employed for scoring the test papers. Moreover, to ensure test reliability, a pilot study was administered, and then two independent raters scored the papers, using the TEEP analytic rubric. Upon scoring, the Kappa test was done to assess interrater reliability. The results showed a reliability coefficient of $Kappa = 0.76$, $p < .05$ for the pre-test, $Kappa = 0.83$, $p < .05$ for the post-test, and $Kappa = 0.82$, $p < .05$ for the delayed post-test.

Data analysis

The gathered data for this quasi-experimental research were analyzed using SPSS 20 (Statistical Package for Social Sciences 20). Initially, a normality test was conducted to decide whether parametric tests or their nonparametric equivalents would be used. Both the Kolmogorov-Smirnov ($p = .20$) and Shapiro-Wilk ($p = .64$) tests yielded that the data were normally distributed (Pallant, 2010). Based on these results, parametric tests were used for the subsequent analysis. Then, inferential statistical analysis was carried out. A two-way between-

groups ANOVA was conducted to analyze whether there were any differences between groups in both short-term and long-term contexts. Also, a one-way repeated measures ANOVA was conducted to analyze within-group differences in short-term and long-term contexts.

In addition to numerical data, adopting a microanalytic approach, the mediational moves used during DA sessions for the linguistic and rhetorical errors were presented in detail in tables with an aim to display how mediation might happen in real-time. These examples allowed us to classify mediational moves along an implicit–explicit continuum (Aljaafreh & Lantolf, 1994), aligning with the learners' ZPD.

Results

Comparable short- and long-term impacts of mediation and correction on learners' writing development

A two-way between-groups analysis of variance was conducted to explore the possible difference between DA and DCF groups in their linguistic accuracy in L2 writing. The students in both groups took three different writing tests over time, and there was a statistically significant main effect for mediation in the post-test, $F(1,45) = 10.113$, $p = .003$ with a large effect size and in the delayed post-test, $F(1,38) = 8.167$, $p = .007$ with a large effect size. Post-hoc comparisons using the Tukey test displayed that the mean score of DA group in the post-test ($M=4.4$, $SD=1.41$) and in the delayed post-test ($M=4.45$, $SD=1.62$) were significantly different from DCF group in the post-test ($M=3.18$, $SD=1.18$) and in the delayed post-test ($M=3$, $SD=1.57$). These outcomes strongly suggest that implementing mediation significantly facilitated learners' progress in effectively using their second language skills in terms of linguistic accuracy. Thus, adopting the DA method, encompassing an implicit-to-explicit feedback loop, would be a beneficial form of addressing learner errors based on grammar, vocabulary, and mechanics. Given the diverse needs of target learners and diverse error natures, the adaptive nature of mediated feedback would help learners gain knowledge and progress in the target language (Mao et al., 2024).

Then, a two-way between-groups analysis of variance was conducted to evaluate potential differences between the mediation and correction groups regarding the rhetorical aspects observed in L2 writing. The study indicated no statistically significant differences between the groups in both the post-test ($F(1, 45) = .378$, $p = .54$) and the delayed post-test ($F(1, 38) = .122$, $p = .80$). These results indicate that neither mediation through DA nor correction through DCF significantly differentiated the groups regarding the rhetorical aspects of L2 writing. One possible explanation is that the mediation sessions may not have systematically addressed rhetorical elements with the same level of scaffolded support as was provided for linguistic issues. While mediation aims to deliver adaptive feedback along a continuum from implicit to explicit, the teacher may have prioritized sentence-level accuracy over higher-order rhetorical features. As a result, the feedback received by students in both groups may have become similar

in practice, diminishing the distinctiveness of mediation-based feedback in this area. Additionally, to further explore the lack of group differences, a closer macrogenetic analysis of the mediation sessions, using verbatim excerpts, could shed light on how students responded to rhetorical mediation, the types of scaffolds that were (or were not) provided, and how learning trajectories evolved over time. These qualitative insights could enhance our understanding of how mediation operates differently from correction, particularly concerning rhetorical development.

Short- and long-term impacts of mediation on learners' writing development

Possible differences in the participants' writing scores over time within groups were examined in terms of linguistic accuracy. Initially a one-way repeated measures ANOVA was done to compare three test scores, pre-test, post-test, and delayed post-test, regarding the linguistic accuracy of DA group. The results displayed that there was a significant effect for time, Wilk's Lambda=.152, $F_{(2,20)}=56$, $p=.000$, partial eta squared= .848 after Bonferroni correction. Even though there was a medium effect size of time on the participants' test-scores, all differences were not significant. The students got higher scores in the post-test ($M=4.364$, $SD=.312$) and in the delayed post-test ($M=4.455$, $SD=.346$) than the pre-test ($M=2.364$, $SD=.251$), but no significant difference between the post-test and the delayed post-test was found. These findings suggest that the participants exposed to mediation demonstrated improvements in linguistic accuracy and were able to transfer this ability over time. Mediation during DA sessions offers a socially co-constructed learning process for learners through the active participation of both teachers and learners. This might enhance the detection and fostering of each learner's learning potential (Ajabshir, 2024), which might explain the improvement in linguistic accuracy and the transfer of that improvement over time.

The findings correspond with the analysis of mediational moves observed during the DA sessions, specifically DA-1 and DA-10. The interactions between the teacher and the students were documented, allowing for an examination of the mediational moves. Table 2 outlines the types of mediational moves employed in both the initial and final DA sessions, along with their frequency. Accordingly, in the first session, the teacher predominantly used explicit mediational moves, such as providing metalinguistic explanation ($f=15$), alternative correct choices ($f=7$), showing the place of errors ($f=13$), and providing accurate answers ($f=4$). Yet, in the last session, while explicit moves continued to exist, there was a decrease in their frequency. For example, the teachers provided only five metalinguistic explanations, indicated the locations of six errors, offered alternative correct forms for two errors, and provided the accurate answer only once. Poehner (2008) notes that a transition from implicit to explicit mediational moves, along with a reduction in their occurrence, may indicate progress among learners. The results of the statistical tests and the analysis of mediational moves suggest a positive influence of mediation on language accuracy, highlighting its potential impact on the linguistic development of learners.

Table 2. *Mediational Moves during DA Sessions in Linguistic Dimension.*

| DA 1 – Mediational Moves | |
|--|---|
| Implicit mediational moves Learner-agency based | Explicit mediational moves Teacher-agency based |
| Displaying sentence with errors (f=8) | Limiting the place of error(s) (f=13) |
| Demanding revision (f=13) | Offering metalinguistic hints (f=3) |
| Offering error(s) nature (f=2) | Offering accurate answer(s) (f=4) |
| | Offering metalinguistic explanation (f=15) |
| DA 10 – Mediational Moves | |
| Implicit mediational moves Learner-agency based | Explicit mediational moves Teacher-agency based |
| Displaying sentence with errors (f=1) | Limiting the place of error(s) (f=6) |
| Demanding revision (f=3) | Offering metalinguistic hints (f=7) |
| | Providing alternative error treatment choice(s) (f=2) |
| | Offering accurate answer(s) (f=1) |
| | Offering metalinguistic explanation (f=5) |

In addition to displaying the spread of mediational moves in the first and last sessions in terms of linguistic dimension, we also presented a verbatim sample representing one part of a mediation/DA session (Özturan, 2022, pp. 113-115). For example, the teacher initiated a DA session by asking for revision, “*Do you think that this is a correct sentence?*”, which is an example of implicit feedback. Yet, the student had difficulty in finding and fixing the error. Therefore, the teacher continued providing feedback in an implicit-to-explicit feedback loop and explained the error’s nature by saying, “*its meaning is clear, but grammar is not correct.*” Since the student still had difficulty, the teacher moved on to a more explicit form of feedback, highlighting the errors and asking, “*What is wrong with it?*”. This mediational strategy did not help the student either, so the teacher provided a metalinguistic hint: “*So this paragraph was written in past tense, but in this sentence you used “will”. So what may be the problem here?*”. Then, the student could give an accurate answer and verbalize the reason by saying “*Oh OK, tense parallelism. I need “would” here*”.

Then, to examine the impact of mediation on rhetorical dimensions, the test of one-way repeated measures ANOVA was administered, and the results displayed a notable effect of time across the three assessments concerning rhetorical aspects, indicating a substantial influence on students’ writing quality, Wilk’s Lambda = .175, $F(2, 20) = 47.03$, $p = .000$, partial eta squared = .825 following Bonferroni correction, with a medium effect size. Students demonstrated higher scores in the post-test ($M = 5.90$, $SD = .42$) compared to the pre-test ($M = 4.00$, $SD = .87$), signifying an improvement in their ability to produce more sophisticated texts in terms of rhetorical aspects after participating in the DA sessions.

Conversely, regarding the transfer of this enhanced skill, the results exhibited a contrasting pattern. In the delayed post-test, students scored lower ($M = 5.00$, $SD = 1.34$) than in the post-test ($M = 5.90$, $SD = .42$), suggesting a regression in their capacity to produce well-organized texts with the same level observed immediately following the DA/mediation sessions. This decline in scores between the post-test and delayed post-test indicates a challenge in maintaining competence in rhetorical aspects over time. If learning behaviours decreased when mediated feedback was removed, this would display the limited learning potential (Poehner,

2008). Moreover, in some cases and for some errors, learners might prefer explicit feedback rather than having a dialogic and adaptive feedback loop as in DA (Alshahrani & Storch, 2025).

Figure 3 provides verbatim examples from ten DA sessions that focus on errors related to rhetorical dimensions, while Table 3 outlines the frequencies of mediational moves observed in both the initial and final sessions (Özturan, 2022, pp. 93-96). Although different verbatim samples were provided for the rhetorical errors, the analysis indicated that in the first DA session, the most common mediation strategy was offering explicit explanations in English for rhetorical errors, such as saying “*There is no topic sentence*” or “*You did not write a concluding sentence*”. In contrast, no mediational moves were noted in the final session concerning rhetorical elements. This trend corresponds with the statistical finding of a significant improvement in rhetorical performance in the post-test, characterized by a medium effect size. However, the lack of mediation in later sessions may account for the regression observed in the delayed post-test, suggesting that initial gains in rhetorical development were not fully internalized. This outcome supports the idea that the progressive withdrawal of mediation must be carefully calibrated, particularly for higher-order discourse-level skills (Poehner, 2008). These findings highlight the importance of continued scaffolding when addressing rhetorical features, which demand greater metacognitive engagement and prolonged support compared to rule-based linguistic forms.

Table 3. *Mediational Moves during DA Sessions in the Rhetorical Dimension.*

| DA 1 – Mediational Moves | | DA 10 – Mediational Moves |
|---|--|--------------------------------|
| Explicit mediational move | Implicit mediational move | |
| Showing a text model through guided questions (f=1) | Limiting erroneous part and asking specific guidance questions (f=3) | No mediational moves annotated |
| Offering an explanation for the errors in English (f=7) | | |

| Implicit Mediational Move ← | | → Explicit Mediational Move | |
|--|--|---|---|
| Asking for the quality of text's organization | Limiting erroneous part and asking specific guidance questions | Showing a text model through guided questions | Offering explanation for the errors in English |
| Guiding student to find the error | <i>Verbatim Samples:</i> | Compare and contrast the model text and student's text | <i>Verbatim Samples:</i> |
| Guiding student to self-treat the error | "Do you think that there is a topic/concluding sentence?" | <i>Verbatim Samples:</i> | "You have two controlling ideas in the topic sentence, but you mentioned only one of them in the supporting sentences." |
| <i>Verbatim Samples:</i> | "Are topic sentence and concluding sentences related?" | "Can you please underline the topic sentence and find the controlling idea?" | |
| "Do you think that this is a well-organized text?" | "How many topics do you have in the text?" | "Can you please underline the concluding sentence?" | "You did not write a concluding sentence." |
| "What may be the problem there?" | "Does this concluding sentence restate and/or summarize the paragraph or start a new topic?" | "Are supporting sentences related to the topic sentence and concluding sentence?" | "There is not a topic sentence." |
| "How can you improve its quality?" | | | |

Figure 3. Sample Verbatim of DA Sessions in Rhetorical Dimension.

Short- and long-term impacts of correction on learners' writing development

The outcomes of the one-way repeated measures ANOVA for the direct CF group revealed a significant effect of time on the participants' writing test scores with respect to linguistic accuracy, Wilks' Lambda = .495, $F(2, 16) = 8.167$, $p = .004$, partial eta squared = .505 after Bonferroni correction. Although the effect size was small, the results indicated statistically significant differences across the time points evaluated. Participants in this group demonstrated higher scores in both the post-test ($M = 3.22$, $SD = 1.21$) and the delayed post-test ($M = 3$, $SD = 1.57$) when compared to the pre-test ($M = 2$, $SD = .97$). However, no statistically significant difference was identified between the post-test and the delayed post-test. These findings suggest that participants who received direct correction in their written assignments exhibited an enhancement in linguistic accuracy. Furthermore, this improvement in accuracy was evident over time, indicating a potential for the longitudinal transfer of this skill among the learners.

These results suggest that DCF is effective in increasing accuracy, but when provided in isolation over a short intervention period, the gains may be limited. The implications for the educator are that DCF represents a useful, yet modest, intervention to enable learners to become more linguistically precise. One possible explanation for this limited effectiveness lies in the non-interactive nature of the DCF procedure, whereby the teacher cannot witness the learner's immediate cognitive reactions, offer differential help, or verify whether the information has been thoroughly internalized. DCF thus might operate best when supplemented with dialogic or scaffolded feedback, which renders the learner's thinking more accessible.

Moreover, the results of the one-way repeated measures ANOVA conducted to analyze the writing test scores of participants in the correction group in terms of rhetorical aspects demonstrated a significant effect for time, Wilk's Lambda=.101, $F(2,16)=71.236$, $p=.000$, partial eta squared=.899 after Bonferroni correction. This medium effect size indicated substantial differences over time in the participants' test scores. Specifically, the students exhibited higher scores in both the post-test ($M=5.77$, $SD=.64$) and the delayed post-test ($M=5.11$, $SD=1.40$) compared to the pre-test ($M=3.33$, $SD=.97$). Yet, no significant difference was found between the post-test and the delayed post-test. These findings indicate that participants who received direct error correction showed improvement in the rhetorical aspects of their writing. Moreover, this improvement in rhetorical dimensions was observable over time, showing potential for the transfer of this ability longitudinally among these learners.

Contrary to the linguistic accuracy results, the findings for the rhetorical aspects indicated a medium effect size, reflecting a greater practical significance of the feedback intervention. This, therefore, suggests that the DCF significantly contributed to the learners' capabilities in terms of the organization of ideas, structuring of arguments, and improvement of coherence at the textual level. From the perspective of instructors, this finding underlines the need to incorporate feedback practices that go beyond sentence-level accuracy and deal explicitly with rhetorical development. The medium effect size also highlights the potential of sustained feedback practices for instilling higher-order writing skills, particularly when the tasks are

varied, and require the learners to apply rhetorical strategies across a number of topics and genres.

Discussion

Feedback in L2 writing has been extensively explored in the scholarly literature, and most of these studies have focused on the most effective CF type that might lead to improvement in linguistic accuracy in L2 writing. However, there is no agreement on this ground, mainly because there is not enough attention paid to the different learner needs. In response to that issue, scholars have highlighted the urgent need for adopting SCT as an approach for the feedback process (Ferris et al., 2013; Mao & Lee, 2020; Storch, 2018). This approach highlights the importance of fine-tuning feedback to address the personalized needs of learners, recognizing that these needs can vary notably among students (Ferris, 2006).

Previous research has focused on specific linguistic items such as the use of articles and the simple past tense, having overlooked improvement in vocabulary choice, organization, and overall quality of writing. Due to this narrow scope, the effectiveness of unfocused CF remains only partially known. Also, many studies were carried out in controlled environments, so scholars have proposed the application of unfocused CF to an authentic L2 classroom setting (Lee, 2020; Storch, 2018).

This study extends these indications by investigating the short-and long-term impacts of SCT-oriented mediation via DA compared to DCF on the linguistic and rhetorical dimensions of L2 writing. It attempts to provide a detailed comparison of the developmental effects of these two approaches over time by presenting empirical evidence obtained from actual classroom settings.

The results showed that mediated feedback in DA sessions significantly improved linguistic accuracy, outperforming DCF on both post-test and delayed post-test measures and exhibiting a large effect size. The results are in accord with Ajanshir's (2024) research, which found that the DA group outperformed the DCF group in L2 pragmatics assessment. This finding is in line with earlier studies showing that DA's adaptive and dialogic approach promotes deeper cognitive engagement (Aljaafreh & Lantolf, 1994; Poehner, 2008). DA mediation addresses learners' evolving needs and modifies support along an implicit-to-explicit continuum, in contrast to DCF, which fixes mistakes without necessarily encouraging learners to engage in metacognitive reflection. Over time, this kind of scaffolding may help people become more conscious of grammatical patterns and facilitate their internalisation (Poehner, 2008).

This finding is not consistent with that of Boggs (2019), who found no statistically significant difference in linguistic accuracy between scaffolded feedback and DCF, emphasising instead DCF's time-saving benefit. Even though scaffolded feedback was not the primary focus of this investigation, its SCT foundation, which is relevant to this study, allows for an intriguing comparison with the current findings. Specifically, the between-group analysis showed that

DA group performed better than DCF group in this study with a significant effect size. This emphasises how crucial adaptive scaffolding and ongoing dialogic interaction are to long-term language development.

Furthermore, within-group analyses yielded that DCF had a small effect size, while mediated feedback had a moderate effect size. This finding might show that the dialogic nature of mediated feedback might have helped learners internalise linguistic forms more successfully. Opportunities to actively engage with feedback and cooperatively build understanding were probably beneficial to learners who were in DA group (Poehner & Infante, 2017; 2019), which might explain the reason that the mediation group showed more notable improvements.

Although there is a growing interest in DA, few quantitative studies have been conducted in this area. Comparing interventionist group DA settings with non-DA settings, Shabani (2018) concluded that DA was an important alternative approach for improving L2 writing. While the results of this study confirm Shabani's findings, this study is distinct in its focus on the linguistic aspects of writing. Another relevant study, also on interactionist DA, was conducted by Rahimi et al. (2015) with three EFL students, who reported gains consistent with the current study. In contrast to the current study's results, Xian (2020) found no long-term effects using interventionist DA targeting only linguistic aspects.

Also, initial comparisons of within-group differences suggested that the small effect size observed for DCF in this study only partially aligns with previous literature. Shintani and Ellis (2013) did not find any long-term effects for DCF, used either in isolation or in combination with metalinguistic explanation, on indefinite article use, although there were short-term gains. Similarly, Bitchener (2008) and Sheen (2007) found little effect for DCF on the accuracy of articles. In contrast, the results of the present study offer a more positive outlook, with the suggestion that consistent DCF can lead to statistically significant, albeit small, longitudinal gains in linguistic accuracy. These findings are thus more consistent with Bitchener & Knoch (2010), who found longitudinal effects for DCF on article use, and Bitchener et al. (2005), who noted improvements across a number of grammatical categories. While mediation thus evidences stronger effects, the current findings do suggest that DCF remains a valuable pedagogic intervention, particularly when it is scaffolded and supported consistently.

In the case of rhetorical development, the outcome was more complicated. The between-group comparisons did not reveal any statistically significant difference between the mediation and DCF groups. However, the within-group comparisons revealed that the mediation group improved significantly in the post-test with a medium effect size. This gain did not sustain during the delayed post-test, suggesting a regression. On the other hand, the DCF group showed consistent improvements, with a medium effect size for both post-test and delayed post-test measures.

This difference in performance might stem from the quality and type of mediation received. The mediating moves revealed that the teacher in the first DA session relied mainly on explicit explanation to address the rhetorical problems. In the final DA session, however, no mediation was provided for the rhetorical aspects. This might have been an early withdrawal of the

scaffolding, especially of the higher-order skills of rhetoric, which usually requires prolonged support for adequate internalization. These findings support Poehner's (2008) assertion that the reduction of mediation should be carried out in a carefully managed way until the internalization of the targeted constructs is adequately achieved. Without sustained mediation, initial gains are superficial and likely to be lost over time.

The differences in rhetorical development between groups can also be explained through Ferris's (1999, 2006) distinction between treatable and untreatable errors. Ferris notes that untreatable errors, which are germane to idea organization, cohesion, and sentence fluency, may not respond well to indirect feedback. These discourse-level features, which are critical for rhetorical development, might often necessitate direct intervention. In this study, while mediation initially enhanced rhetorical gains through mediated feedback in DA sessions, the teacher's shift to more explicit, unidirectional feedback and the absence of rhetorical mediation may have prevented learners' ability to internalize complex rhetorical patterns. On the other hand, DCF may have consistently provided precise, rule-based corrections for surface-level rhetorical features, and this might lead to sustained effectiveness over time. These findings assert that effective mediation for rhetorical development may necessitate dialogic interaction to address the untreatable nature of higher-order writing concerns.

The present study departs from the relevant studies in that it is situated in a real L2 writing classroom environment and does not involve pre-specified scopes of feedback. Whereas earlier studies tested mediation and correction for specific grammar topics within artificial settings, the current research examined mediation and correction in linguistic and rhetorical dimensions in the context of real L2 writing tasks. Results reveal that mediated input might have helped learners with linguistic accuracy problems, while rhetorical problems improve with the quality input of explicit correction. This aligns with Mao et al.'s review (2024). The possible explanations could be due to incomplete grammatical knowledge or divergent needs. Goal-oriented dialogic interactions are thus important in teachers' understanding of what is happening beneath the surface of a learner's error, which falls under the Mediated Learning Experience as proposed by Feuerstein et al. (2010). Goal-oriented interaction, an essential aspect of SCT, allows educators to effectively create a non-discriminatory and productive learning setting tailored for every learner. In such a structure, mediation provides a great chance for L2 writing instructors to solve learners' errors, which can enable learners to achieve success in L2 writing. Rhetorical problems may also be based on the lack of knowledge of the learner. However, in such cases, taking an implicit-to-explicit feedback loop to show the underlying reasons is not required because accurate guidance from the instructor would be enough for support.

In brief, these findings shed light on implications for L2 writing instructors and teacher candidates: Feedback methodologies must be adapted according to both the nature of errors and students' needs (Mao et al., 2024). However, some methodological limitations of the study limit drawing expansive conclusions from these findings. Theoretically, direct error correction and providing mediation of learner errors both play crucial roles in the improvement of linguistic accuracy and rhetorical dimensions within L2 writing. Sociocultural Theory and

Dynamic Assessment help explain the causes that lead to the emergence of errors by means of goal-oriented dialogical interactions, thus leading to the creation of inclusive learning environments, which take into consideration both the teacher's mediating role and the student's responses to mediational moves. This interaction causes cognitive growth through the process of elaborating stimuli into mediated stimuli and allows educators to observe and track the ZPD of each learner (Feuerstein et al., 2010; Vygotsky, 1978). Due to increasing classroom diversity, the need to shift toward SCT was emphasized as part of dealing with errors of linguistic inaccuracy. Thus, language instructors and teacher candidates should be aware of the benefits of SCT and DA in L2 writing settings as well as the need for adaptiveness in a contemporary educational setting as learners come with diverse backgrounds. However, regarding its practicality, DA's implementation in classes, especially in crowded classes, may not be easy. Even though in this study the data were collected as part of a real L2 writing course, both the mediation and correction sessions were conducted outside of the class, which might not be feasible and practical for L2 writing teachers in real life. For that reason, we may suggest conducting group DA sessions in the classroom, which would enhance a social learning environment for students and take less time compared to one-on-one DA sessions. Also, if there were some students who fell behind their peers, one-on-one DA sessions could be a better alternative for them. Also, mediation moments could be integrated into different stages of the L2 writing process, such as revision processes. Teachers and teacher candidates could be informed about adopting different methods (e.g., direct corrective feedback versus mediated feedback) while dealing with learner errors. Lastly, today's computational tools, particularly generative artificial intelligence tools, offer tremendous potential benefits for teachers and students by providing personalized feedback. By instructing these tools with appropriate prompts, teachers would benefit and save time (e.g., Fathi & Rahimi, 2024; Özturan & Shrestha, 2025).

Conclusion

According to this study, L2 writing instructors can effectively address student errors through both mediation and correction. Nonetheless, the heuristic environment that mediation produces, defined as dialogic interactions, may favourably impact both immediate and long-term transfer effects. DCF, on the other hand, depends on teacher agency, which could result in students paying little attention to criticism and accepting corrections passively. Over time, such dynamics probably affect L2 writing performance. As part of DA, mediation is also tailored to each learner's needs, encouraging learner agency and establishing a personalised learning environment through a graduated implicit-explicit continuum of prompts and feedback. The data gathered from real L2 writing classroom practices, which compares the effectiveness of correction and mediation, is a major contribution of this study.

Interestingly, the only longitudinal difference between groups was in linguistic accuracy. Therefore, while a solely quantitative research design may highlight significant and non-significant differences, a moment-to-moment analysis of interactions during mediation

sessions also needs exploration. This would illuminate the reasons behind how mediation helped learners transfer mediational prompts in linguistic accuracy. In light of this limitation, further studies may uncover interactional analysis during DA sessions by categorizing mediational prompts used for linguistic errors. Moreover, future studies can recruit more participants from diverse departments or different learning settings (ESL or academic writing) to compare mediation and correction. This study used one-on-one interactive DA and unfocused DCF, but both approaches can be explored in group or classroom settings in future research.

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Appendices

Appendix A – The Test in English for Educational Purposes Attribute Writing Scales

A. Relevance and adequacy of content

1. The answer bears almost no relation to the task set. Totally inadequate answer.
2. Answer of limited relevance to the task set. Possibly major gaps in the treatment of topic and/or pointless repetition.
3. For the most part answers the tasks set, though there may be some gaps or redundant information.
4. Relevant and adequate answer to the task set.

B. Compositional organization

1. No apparent organization of content.
2. Very little organization of content. Underlying structure not sufficiently controlled.
3. Some organizational skills in evidence, but not adequately controlled.
4. Overall shape and internal pattern clear. Organizational skills adequately controlled.

C. Cohesion

1. Cohesion almost totally absent. Writing so fragmentary that comprehension of the intended
-

communication is virtually impossible.

2. Unsatisfactory cohesion may cause difficulty in comprehension of most of the intended communication.

3. For the most part satisfactory cohesion although occasional deficiencies may mean that certain parts of the communication are not always effective.

4. Satisfactory use of cohesion resulting in effective communication.

D. Adequacy of vocabulary for purpose

1. Vocabulary inadequate even for the most basic parts of the intended communication.

2. Frequent inadequacies in vocabulary for the task. Perhaps frequent lexical inappropriacies and/or repetition.

3. Some inadequacies in vocabulary for the task. Perhaps some lexical inappropriacies and/or circumlocution.

4. Almost no inadequacies in vocabulary for the task. Only rare inappropriacies and/or circumlocution.

E. Grammar

1. Almost all grammatical patterns inaccurate.

2. Frequent grammatical inaccuracies.

3. Some grammatical inaccuracies.

4. Almost no grammatical inaccuracies.

F. Mechanical accuracy – punctuation

1. Ignorance of conventions of punctuation.

2. Low standard of accuracy in punctuation.

3. Some inaccuracies in punctuation.

4. Almost no inaccuracies in punctuation.

G. Mechanical accuracy – spelling

1. Almost all spelling inaccurate.

-
2. Low standard of accuracy in spelling.
 3. Some inaccuracies in spelling.
 4. Almost no inaccuracies in spelling.
-

Appendix B – Statistical Tests

Table 4 displays the results of a two-way between-groups (DA vs DCF) ANOVA test on the linguistic accuracy, and Table 5 shows the findings of a two-way between-groups (DA vs DCF) test on the rhetorical aspects of L2 writing.

Table 4. *Two-way Between-groups ANOVA.*

| Linguistic Accuracy / Pre-test | | | | | | |
|---|----------------|----|-------------|--------|-------|-------------|
| | Sum of Squares | df | Mean Square | F | Sig. | Effect Size |
| Between Groups | 1.118 | 1 | 1.118 | .971 | .330 | 0.21 |
| Linguistic Accuracy / Post-test | | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. | Effect Size |
| Between Groups | 17.366 | 1 | 17.366 | 10.113 | .003* | 0.18 |
| Linguistic Accuracy / Delayed Post-test | | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. | Effect Size |
| Between Groups | 20.945 | 1 | 20.945 | 8.167 | .007* | 0.17 |

*p<.05

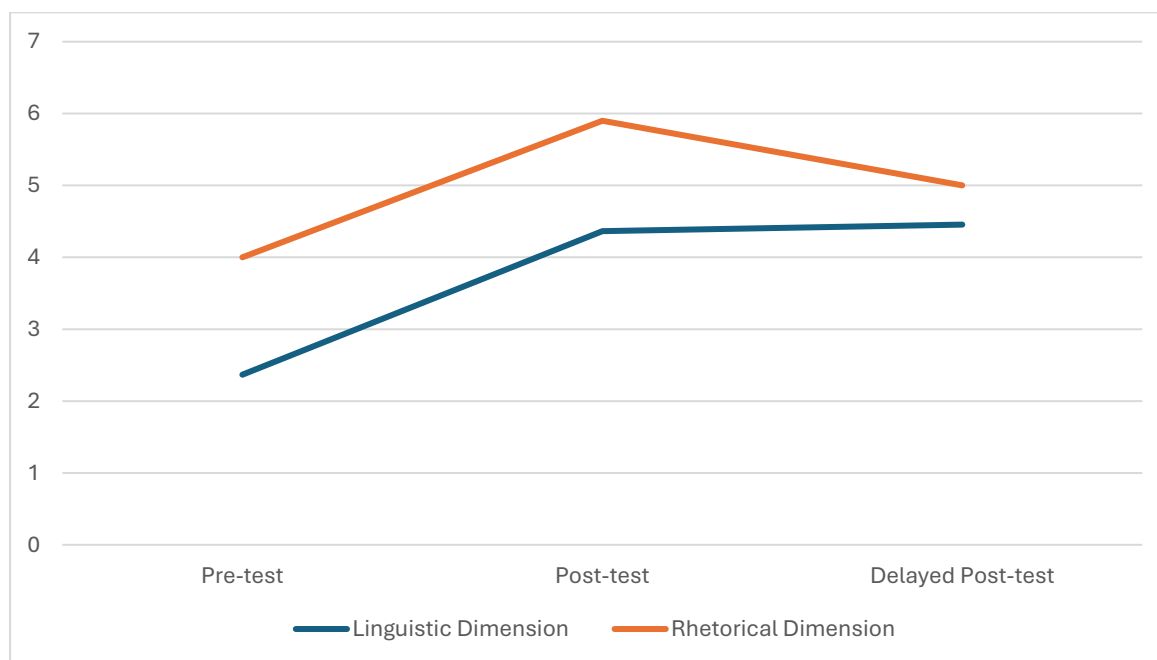
Table 5. *Two-way Between-groups ANOVA.*

| Rhetorical Aspects / Pre-test | | | | | | |
|--|----------------|----|-------------|------|------|-------------|
| | Sum of Squares | df | Mean Square | F | Sig. | Effect Size |
| Between Groups | .622 | 1 | .622 | .187 | .85 | 0.08 |
| Rhetorical Aspects / Post-test | | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. | Effect Size |
| Between Groups | .149 | 1 | .149 | .378 | .542 | 0.08 |
| Rhetorical Aspects / Delayed Post-test | | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. | Effect Size |
| Between Groups | .122 | 1 | .122 | .065 | .80 | 0.02 |

$p < .05$

Appendix C – Line Graphics

Figure 4 represents the effect of mediated feedback on the linguistic and rhetorical development in L2 writing, while Figure 5 shows the improvement in linguistic and rhetorical aspects of L2 writing through correction.

**Figure 4.** *Short- and Long-term Impacts of Mediation on Learners' Writing Development.*

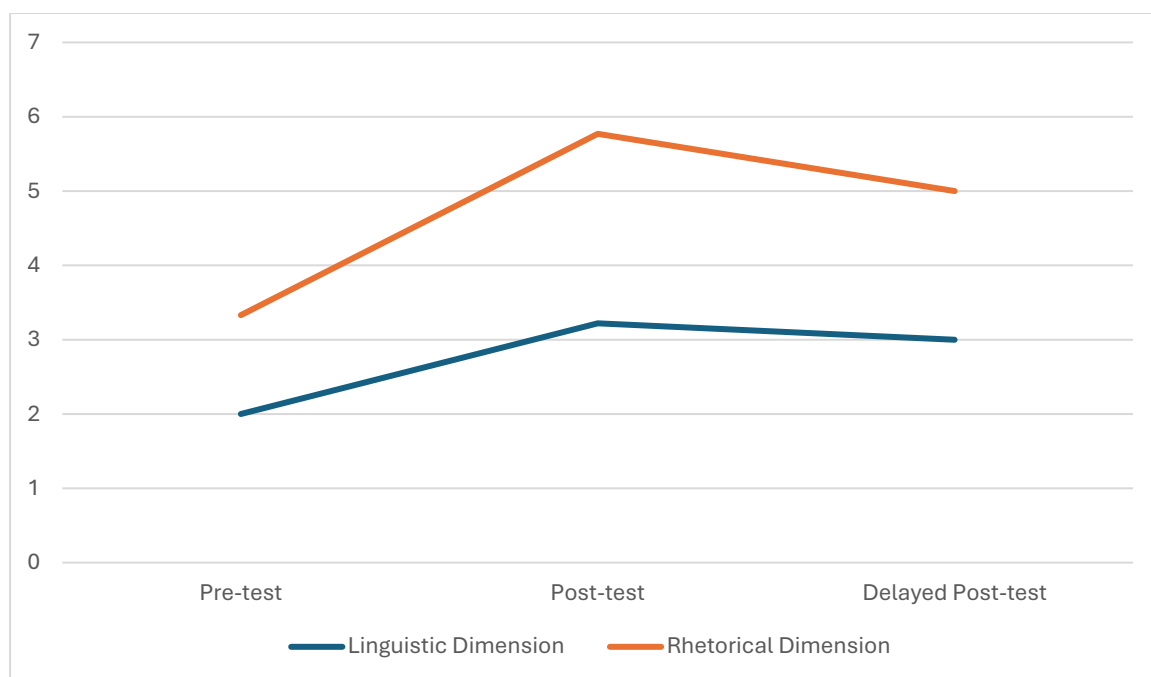


Figure 5. Short- and Long-term Impacts of Correction on Learners' Writing Development.

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