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The Effects of Explicit and Implicit Oral Corrective Feedback on L2 Learning: The Case of That-Trace Filter

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Abstract

The purpose of this study was to examine the effectiveness of explicit corrective feedback (CF) strategies (i.e., metalinguistic feedback and explicit correction) versus implicit CF methods (i.e., recasts and explanation questions) in helping English language learners acquire the that-trace filter. To this end, one hundred twenty intermediate English learners were recruited. Each participant was randomly assigned to one of five groups: control, recast, metalinguistic feedback, explicit correction, and clarification request. The participants were given a written production test (WPT) and a grammaticality judgment test (GJT) as pre- and posttests, respectively. The experimental groups underwent two sessions of treatment that included interactive activities. These activities were designed as information-gap tasks that utilized the that-trace filter. Participants received CF that focused on their wrong answers based on the groups they were assigned to. The posttest results indicated that the experimental groups significantly outperformed the control group. When comparing the experimental groups' results on receptive and productive tests, however, no statistically significant differences were found. In addition, a semi-structured interview was conducted with 12 individuals. The findings indicate that teachers' CF has a significant role in enhancing students' acquisition of L2 complex grammar structures.

Keywords: Oral Corrective Feedback, Explicit Feedback, Implicit Feedback, That-Trace Filter

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Introduction

The importance of corrective feedback (CF) and its impact on language acquisition remains a central focus in second and foreign language research. An increasing number of studies have examined the use of explicit versus implicit CF, with researchers exploring questions such as which types of CF are most effective, when errors should be corrected, and whether feedback

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is more beneficial when delivered immediately or delayed (e.g., Fu & Li, 2022; Öztürk, 2023). Additionally, the effectiveness of CF has been investigated across various linguistic domains, including grammar (e.g., Ellis et al., 2006; Li, 2014; Liu & Hwang, 2024; Zhao & Ellis, 2022), pronunciation (e.g., Bryfonski & Ma, 2020; Silpachai et al., 2024), L2 pragmatics (e.g., Yousefi & Nassaji, 2024) and writing accuracy (e.g., Cheng et al., 2025; Lira-Gonzales & Nassaji, 2023; Suzuki et al., 2019). Some researchers suggest that implicit feedback may have longer-lasting effects, particularly in supporting short-term memory retention (Ellis et al., 2006; Li, 2010).

Zhao and Ellis (2022) examined how two CF types affect third-person singular -s acquisition in a classroom study. The study included 109 Chinese university students who performed three communication tasks, two pretests, and immediate and delayed posttests. Participants were split into three experimental and one control groups. One experimental group got implicit CF as single-move recasts, whereas another received explicit CF as a prompt-followed by a recast. The third group did tasks without feedback, and the control group just tested. The experimental groups improved procedural and declarative knowledge accuracy, although results were similar. Control group did not improve. They found that explicit feedback with dual-move CF increased repair uptake but not accuracy. Implicit CF was generally as effective as explicit.

Iizuka and Nakatsukasa (2020) examined how oral CF affects learners' subconscious and explicit comprehension of Japanese locative particles. The study involved 36 students describing an information-gap picture with no feedback, metalinguistic explanations, or recasts. Participants were examined before, after, and afterward. The untimed grammaticality judgment test measured explicit knowledge, whereas the timed visual description exam measured implicit knowledge. Both those who received feedback and those who watched it improved similarly, demonstrating no differences across CF types.

A metalinguistic corrective feedback-based digital gaming system was introduced by Liu and Hwang (2024). The researchers tested how this technique affected beginner EFL learners' grammar acquisition, motivation, self-efficacy, and flow. The study included 76 university students. The experimental group used digital games with metalinguistic CF, whereas the control group used typical instantaneous mistake correction. Metalinguistic CF improved grammar acquisition, especially in less confident students. Most recently, the perspectives and actions of four inexperienced instructors in Chinese university-level EFL writing courses with regard to written feedback were examined in a study by Cheng et al. (2025). The teachers used a thorough feedback strategy, according to data from semi-structured interviews and writing examples. They corrected grammatical mistakes and other language difficulties. The instructors' approaches to providing feedback varied, but they were in agreement about its scope and purpose. Regarding the strategies and emphasis of criticism in particular, there were disparities between their views and actions.

CF research has increasingly studied how emotional elements like learner fear and self-regulation affect feedback effectiveness. Öztürk (2023) studied the impact of corrective feedback on emotional reactions in online language learning. Results showed that anxious students found specific remedial comments too critical or scary to benefit from. However, implicit feedback—including recasts—reduced anxiety and enhanced participation. Fu and Li (2022) examined self-regulated learning mechanisms and corrective feedback absorption. Goal

planning and self-monitoring help language learners understand and use feedback. The findings emphasized the need of addressing learners' psychological and cognitive profiles when designing corrective feedback treatments, since individual variations can greatly impact feedback efficacy.

The *that*-trace filter is essential for L2 learners to comprehend more complex syntactic patterns in English (White, 2018). Communicative redundancy and limited exposure to the target structure influence the selection and comprehension of the *that*-trace filter, a syntactic phenomenon in English (Goo, 2012). In English grammar, the *that*-trace filter is a constraint that prohibits the word *that* from appearing before a *wh*-word in specific subordinate clauses (White, 2018). This filter is deemed communicatively redundant, as its presence or violation does not substantially affect the meaning or understanding of a *wh*-question. Nonetheless, its redundancy may necessitate careful consideration of message structure, frequently resulting in cognitive overload, especially in educational contexts (Goo, 2012; White, 2018). The *that*-trace filter, despite its significance in syntactic theory, is infrequently addressed in ESL or EFL instruction. Standard grammar texts frequently neglect this aspect, resulting in a lack of explicit guidance for learners regarding this rule (Ionin & Montrul, 2019).

In light of these challenges, it is essential to deliver targeted instruction on this form to facilitate L2 learners' acquisition of the correct construction. This teaching method enhances students' comprehension of this specific syntactic phenomenon by minimizing the influence of their prior knowledge or experiences with other syntactic patterns (White, 2020).

To bridge the existing gap in the literature, this study sought to clarify the effectiveness of error correction by comparing more implicit CF strategies (e.g., recasts and clarification requests) with more explicit approaches (e.g., metalinguistic feedback and explicit correction) and examining their potential impact on L2 grammar acquisition, specifically the *that*-trace filter. Additionally, the study aimed to explore EFL learners' perceptions of CF usage. To this end, the following research questions were developed:

RQ1: Does implicit corrective feedback (i.e., recast and clarification request) significantly affect EFL learners' *that*-trace filter learning?

RQ2: Does explicit corrective feedback (metalinguistic and explicit correction) significantly affect EFL learners' *that*-trace filter learning?

RQ3: Which type of corrective feedback has a more significant effect on learning *that*-trace filter?

RQ4: What are EFL learners' perceptions of using corrective feedback?

Method

Participants

With an average of three to six years of English education, the 120 male students enrolled in this study ranged in age from sixteen to thirty. Their age ranged from 16 to 25 ($M = 19.50$; $SD = 1.42$). They were from five non-randomized, intact classes at an English institute, with each class consisting of 23 to 25 students. The participants were studying English in an EFL context. Having never lived or studied in a country where English is the primary language, none of the participants were native English speaker. Their results on the institute-administered Oxford Placement Test indicated that they were proficient at the intermediate level. The participants were divided into five groups: one served as a control group ($n = 25$), while the other four were

given different types of feedback: metalinguistic ($n = 23$), explicit correction ($n = 23$), recast ($n = 24$), and clarification request ($n = 25$). To ensure compliance with ethical standards, we made sure that all participants gave their informed consent before they were involved in the study.

Instruments

Target grammar structure

The researcher selected *that*-trace filter as the target structure for this study. As can be seen in the example, it refers to the deletion of complementizer *that* (the process known as *that complementizer deletion*), in *wh*-questions, when the question originates from the subject position (not object position) of the subordinated clause.

- a. * Who do they think that works at library?
Who do they think works at library?
- b. * Who do they think that met Alan?
Who do they think met Alan?

Pedagogical tasks

For this study, we designed two information gap activities and implemented them across two treatment sessions. The learners received a worksheet containing 25 sentences in each session. Among these, 15 were target sentences (developed to elicit *wh*-subject movement addressing *that*-trace filter from the subordinate clause), while the remaining 10 were distractors (developed to elicit *wh*-object movement from the subordinate clause). As illustrated in the example below, each sentence included a blank that required learners to fill in with the name of an item. The teacher asked the participants to pose a question about each item in order to complete the sentences, and then provided them with the corresponding name. Each treatment session lasted approximately 30 minutes.

- a. Judy thinks that _____ passed the exam yesterday.
- b. Harry thinks that Mary saw _____ last night at the party.

Grammaticality judgment test

The researcher generated 48 pairings of sentences, which were subsequently divided into two sets of 24 pairs (Form A and Form B): one set was designated for the pretest, while the other was designated for the posttest. Each combination was composed of an interrogative sentence and a declarative sentence. The declarative sentence contained an underlined noun phrase (NP) that could serve as either the subject or object of the subordinate clause. The interrogative sentence subsequently posed a query regarding the underlined NP, as demonstrated by the following examples:

([1b] is an ungrammatical interrogative, while [2b] is a grammatical one):

- (1). a) They think that Alex visits Jim every week.

*b) Who do they think that visits Jim every week?

(2). a) They think that John ate lunch with Mary last night.

b) Who do they think ate lunch with Mary last night?

In each test, out of the 24 pairs of sentences, 16 were target items that involved the *that*-trace filter, while the remaining 8 were distractors, all of which were grammatical. The target items featured *wh*-movement from the subject position of the subordinate clause, whereas the distractors involved *wh*-movement from the object position of the subordinate clause. Instantly after the participants' judgment on the grammaticality of the interrogatives, they were instructed to write the correct form of those that they had judged ungrammatical on the other side of their answer sheets.

Written production test

For the written production test (WPT) test, 32 declarative sentences were developed by the researcher (20 target and 12 distractor items, each containing an underlined NP). They were divided into two tests, each with 16 items (form A and form B), for both the pre- and the posttest. Each test included 10 target structures intended to elicit *wh*-movement, incorporating the *that*-trace filter, as well as 6 distractors designed to elicit *wh*-movement from the object position within the subordinate clause. The participants were instructed to formulate a question targeting the NP that was underlined in each given sentence. In the following examples, the underlined NP was either the subject or the object of the subordinate clause:

-They think that Henry met Katy at the party.

-They think that John lost his wallet yesterday.

Semi-structured Interview

We randomly selected three participants from each experimental group, which included metalinguistic, explicit correction, recast, and clarification request groups. The interview was composed of five open-ended questions that were intended to investigate the participants' engagement with the tasks and their perceptions of the corrective feedback they received. We used the same set of questions in all interviews, audio-recorded them, and transcribed them for accuracy to ensure the reliability of the process. Furthermore, two independent researchers reviewed the transcripts to confirm the consistency of the identified themes. We conducted a pilot interview with a smaller sample ($n = 5$) prior to the main interviews to ensure validity. This enabled us to modify the questions to enhance their relevance and clarity. We conducted each interview in English, ensuring it lasted between 10 and 15 minutes. The following are five interview questions:

1. How did the feedback you received during the lessons help you understand your mistakes? Can you give an example?

2. When you made a mistake, did you feel the feedback helped you improve? Why or why not?

3. What type of feedback did you find most useful during the activities? Was it easy to understand?

4. Do you think the feedback you got in class will help you avoid making the same mistakes in the future? Why?

5. How comfortable did you feel asking questions or correcting your sentences after receiving feedback from the teacher?

Data Collection Procedure

Data were collected across four sessions, held on three separate days over a two-week period, in a classroom setting. During the first session, learners participated in the pretest (40 minutes), which consisted of a WPT and GJT. They then attended two treatment sessions on separate days (sessions two and three). In each treatment session, the learners participated in interactional activities with the researcher for about 30 minutes. The activities were performed as information gap exercises. During the treatment tasks, participants received one type of CF based on their group membership, following any incorrect utterances. For each experimental group, only one type of CF was provided. For example, only metalinguistic feedback was provided to learners in the metalinguistic group, and the process continued from there. The control group, however, received no CF. We administered the WPT and GJT posttests immediately after the second treatment in the third session, each taking nearly 40 minutes; The WPT posttest was administered before the GJT to avoid any potential influence on the participants' performance in the WPT through the use of grammar in the GJT. In the fourth session, the semi-structured interview was carried out on 12 participants from the experimental groups.

Data Analysis

The data was analyzed using various statistical approaches to determine how effective each of the four CF types were in helping participants learn grammar. To begin, we assessed the participant homogeneity by doing one-way ANOVAs on the GJT and WPT pretest scores. The research concerns were then addressed by doing a mixed-effects ANOVA, the Brown-Forsythe technique, and Dunnett's T3 post hoc comparisons on the GJT and WPT scores.

To complement the quantitative analysis, participants were also asked to fill out semi-structured interviews about their thoughts and feelings about CF. The interviews were examined with the six-step thematic analysis method proposed by Braun and Clarke (2006). In order to supplement and improve upon the quantitative results, the developing themes were methodically investigated and classified. The emerging themes were systematically examined and categorized to complement and refine the quantitative findings.

Results

It was thought important to use the Shapiro-Wilk test of normalcy to evaluate if the data was normal before deciding on a statistical test (see Table 1).

Table 1*Tests of Normality*

Test Type	Group	Shapiro-Wilk		
		Statistic	df	Sig
GJ Pretest	Recast	.943	24	.191
	Clarification Request	.929	25	.082
	Metalinguistic	.944	23	.216
	Explicit Correction	.947	23	.255
	Control	.933	25	.103
GJ Posttest	Recast	.968	24	.614
	Clarification Request	.931	25	.092
	Metalinguistic	.926	23	.089
	Explicit Correction	.919	23	.063
WP Pretest	Control	.955	25	.329
	Recast	.936	24	.175
	Clarification Request	.970	25	.594
	Metalinguistic	.954	23	.311
	Explicit Correction	.925	23	.082
WP Posttest	Control	.942	25	.186
	Recast	.940	24	.163
	Clarification Request	.925	25	.068
	Metalinguistic	.933	23	.126
	Explicit Correction	.936	23	.148
	Control	.914	25	.059

Table 1 displays the results of the Shapiro-Wilk tests, which showed that the data were normally distributed with all significant values being higher than the 0.05 confidence level. The average and standard deviation of the participants' post- and pretest scores are shown in Table 2.

Table 2*Descriptive Statistics*

Test Type	Group	M	SD	N
GJ Pretest	Recast	6.33	1.903	24
	Clarification Request	6.16	1.546	25
	Metalinguistic	6.09	2.745	23
	Explicit Correction	6.35	2.288	23
	Control	6.24	2.204	25
GJ Posttest	Recast	16.33	4.341	24
	Clarification Request	19.20	3.617	25
	Metalinguistic	17.78	4.972	23
	Explicit Correction	18.45	7.398	23
	Control	7.16	2.135	25
WP Pretest	Recast	.63	.970	24
	Clarification Request	.68	1.069	25
	Metalinguistic	.70	1.020	23
	Explicit Correction	.61	.988	23
	Control	.72	.980	25
WP Posttest	Recast	10.33	4.622	24
	Clarification Request	11.88	3.166	25
	Metalinguistic	12.04	2.852	23
	Explicit Correction	10.76	3.195	23
	Control	1.49	1.734	25

To ensure that the five groups did not differ in terms of their knowledge of the *that*-trace filter, one-way ANOVAs were conducted on the pretest scores (see Table 3).

Table 3*One-Way ANOVAs on Pretests*

		SS	df	MS	F	Sig.
GJT	Between Groups	1.170	4	.292	.062	.993
	Within Groups	538.297	115	4.681		
	Total	539.467	119			
WPT	Between Groups	.214	4	.053	.053	.995
	Within Groups	116.453	115	1.013		
	Total	116.667	119			

The results of one-way ANOVAs on pre-tests illustrate no statistically significant between-group differences with regard to GJT ($F_{4, 115} = .062, p = .993$) and also WPT ($F_{4, 115} = .053, p = .995$). Therefore, it can be concluded that the groups began the experiment with almost equal performance. A 2×5 mixed ANOVA was carried out to answer the third research question, which sought to determine how well four different CF types affected the acquisition of the *that*-trace filter. Two primary factors were included in this analysis: the within-subjects variable of time (pre- and post-test) and the between-subjects variable of group (recast, clarification request, metalinguistic, explicit correction, and control). We measured the individuals' progress on both the GJT and the WPT, which are dependent variables. In a further study, the posttest scores for the GJT and WPT were subjected to the Brown-Forsythe technique and Dunnett's T3 post hoc pairwise comparisons because the homogeneity of variances assumption had been violated (as shown by Levene's statistic, $p > .05$).

Table 4*Results of Mixed ANOVA on GJT Scores*

Source		Type III SS	MS	df	F	Sig.	Partial η^2
Within-Subjects	Time	4450.094	4450.094	1	366.680	.000	.761
	Time * Group	1133.002	283.250	4	23.339	.000	.448
	Error (Time)	1395.661	12.136	115			
Between-Subjects	Group	1096.240	274.060	4	18.039	.000	.386
	Error	1747155	15.193	115			

Table 4 shows the results of mixed ANOVA on the GJT. The results revealed a significant main effect of time ($F_{1, 115} = 366.680, p = .000, \eta_p^2 = .761$) and group ($F_{4, 115} = 18.039, p = .000, \eta_p^2 = .386$). Moreover, Table 4 depicts significant interaction of time and group effect ($F_{4, 115} = 23.339, p = .000, \eta_p^2 = .448$). The results of the Brown-Forsythe procedure (Table 5) on GJ posttest illustrated a significant difference between the groups ($F_{4, 71.294} = 23.892, p = .000$).

Table 5*Brown-Forsythe Procedure on GJ Posttest*

		Statistic	df1	df2	Sig.
GJ Posttest	Brown-Forsythe	23.892	4	71.294	.000

Dunnett's T3 post hoc comparisons (see Table 6) revealed a significant improvement in all experimental groups compared to the control group on the GJ posttest. Nevertheless, there was no statistically significant difference detected among the experimental groups.

Table 6*Post Hoc Comparisons on GJ Posttest*

Dependent Variable	(I) Group	(J) Group	Mean Difference (I-J)	Sig.
GJ posttest	Recast	Clarification Request	-2.87	.085
	Recast	Metalinguistic	-1.45	.147
	Recast	Explicit Correction	-2.12	.091
	Recast	Control	9.17	.000
	Clarification Request	Metalinguistic	1.42	.151
	Clarification Request	Explicit Correction	.75	.813
	Clarification Request	Control	12.04	.000
	Metalinguistic	Explicit Correction	-.67	.841
	Metalinguistic	Control	10.62	.000
	Explicit Correction	Control	11.29	.000

As shown in Table 7, another 2×5 mixed ANOVA was conducted on WPT.

Table 7*Results of Mixed ANOVA on WPT Scores*

Source		Type III SS	MS	df	F	Sig.	Partial η^2
Within-Subjects	Time	4151.143	4151.143	1	813.759	.000	.876
	Time * Group	931.858	232.965	4	45.669	.000	.614
	Error (Time)	586.637	5.101	115			
Between-Subjects	Group	914.982	228.745	4	35.668	.000	.554
	Error	737.514	6.413	115			

The results of mixed ANOVA on WPT illustrated a significant main effect of time ($F_{1, 115} = 813.759$, $p = .000$, $\eta_p^2 = .876$), group ($F_{4, 115} = 35.668$, $p = .000$, $\eta_p^2 = .554$) and time and group interaction ($F_{4, 115} = 45.669$, $p = .000$, $\eta_p^2 = .614$). Brown-Forsythe results (Table 8) illustrated a between groups significant difference ($F_{4, 86.508} = 43.722$, $p = .000$).

Table 8*Brown-Forsythe Procedure on WP Posttest Scores*

	Statistic	df1	df2	Sig.
Brown-Forsythe	43.722	4	86.508	.000

Table 9 displays the results of Dunnett's T3 post hoc comparisons.

Table 9*Post Hoc Comparisons on WP Posttest Scores*

Dependent Variable	(I) Group	(J) Group	Mean Difference	Sig.
WP Posttest	Recast	Clarification Request	-1.55	.208
	Recast	Metalinguistic	-2.07	.073
	Recast	Explicit Correction	-.43	.821
	Recast	Control	8.84*	.000
	Clarification Request	Metalinguistic	-.16	.972
	Clarification Request	Explicit Correction	1.12	.347
	Clarification Request	Control	10.39	.000
	Metalinguistic	Explicit Correction	1.28	.264
	Metalinguistic	Control	10.55	.000
	Explicit Correction	Control	9.27	.000

Table 9 shows that on the WP posttest, every single experimental group fared much better than the control group. Nonetheless, the experimental groups did not differ statistically significantly.

Results of Semi-structured Interviews

The results of the semi-structured interview revealed that the metalinguistic feedback group's participants expressed high satisfaction with the CF they received. The participants observed that the comprehensive grammatical explanations given by their teacher aided them in comprehending their errors more effectively. A participant highlighted the significance of comprehending the grammatical rule, as it enabled them to rectify not only a single blunder but also prevent such mistakes in subsequent situations. This group valued the clarity and thoroughness of the comments, which they believed could have a significant impact on their enduring learning. In addition, they were at ease interacting with the teacher, seeking clarification, when necessary, thus strengthening their comprehension.

The explicit correction group valued the promptness and clarity of the feedback they received, as it provided them with straightforward responses and facilitated their rapid identification of errors. Nevertheless, one respondent expressed anxiety about his limited understanding of the underlying rationales behind the feedback, although they found the adjustments beneficial at the time. Two participants observed that the feedback they received did not consistently motivate them to inquire further, as they frequently received the correct answer without additional explanation.

Within the recast group, individuals conveyed a preference for the detailed nature of the feedback. They found it can be beneficial to have their mistakes rectified in a manner that enabled them to carry on speaking uninterrupted. The individuals perceived this implicit kind of feedback to be effective in facilitating their awareness of errors, as the teacher's recast flawlessly incorporated the accurate form into the dialogue. This group valued the feedback for its ability to sustain the flow of conversation, minimizing any potential embarrassment and fostering a conducive learning environment. Participants perceived this approach as very beneficial for enhancing their oral communication abilities.

The group receiving explanation experienced both positive and negative emotions in response to the interview questions. One participant valued the chance to engage in self-correction, as it prompted them to contemplate their errors and analyze them in a thoughtful manner. Nevertheless, two individuals perceived this feedback as excessively vague and

frequently encountered difficulties in pinpointing the precise nature of their mistakes. The absence of clear guidance occasionally caused them to experience uncertainty and diminished confidence over their progress. Participants observed that this form of feedback occasionally caused them to feel reluctant in seeking further clarification, as they were uncertain about the specific aspects they needed to address.

Braun and Clarke's (2006) six-step framework guided the thematic analysis, which started with familiarization, transcribed and repeatedly reviewed the interview data to gain an in-depth understanding. We then generated initial codes that captured key aspects of participants' responses to CF. We subsequently organized these codes into potential themes, highlighting patterns related to understanding, engagement, and retention. In the reviewing stage, we refined the themes to ensure they accurately reflected the data and were coherent. During the defining phase, we clearly articulated the themes and assigned each one a descriptive label to capture its essence. Finally, a comprehensive report supported the themes with relevant data extracts. Table 10 presents the final themes, their descriptions, and supporting data extracts from the interviews.

Table 10
Thematic Analysis of Responses

Theme	Description	Supporting Data Extracts
Clarity and Depth of Understanding	Participants' ability to understand the feedback and underlying grammatical rules.	- "The teacher explained the grammar rules behind my mistake, so I understood why I was wrong." (Metalinguistic Feedback) - "I got the correct answer, but I didn't always understand why." (Explicit Correction) - "The teacher corrected my sentence, and I could hear the right form." (Recast)
Learning Engagement and Comfort	Participants' comfort level in engaging with the feedback, asking questions, and correcting their mistakes.	- "I felt comfortable asking questions because the feedback was clear." (Metalinguistic Feedback) - "The feedback was quick, so I didn't feel the need to ask questions." (Explicit Correction) - "I wasn't embarrassed because the correction didn't stop the conversation." (Recast)
Long-Term Retention	Participants' perception of whether the feedback would help them avoid repeating the same mistakes in the future.	- "Now that I know the rules, I think I won't make the same mistake again." (Metalinguistic Feedback) - "I'm not sure I'll remember the correction later because I didn't fully understand it." (Explicit Correction) - "Hearing the correct sentence helped me remember." (Recast)

As illustrated in Table 10, the initial theme, clarity and depth of understanding, underscores the differences in comprehension among feedback categories. The most profound feedback was metalinguistic, which facilitated participants' conceptual comprehension of their errors. Conversely, explicit correction frequently failed to provide a comprehensive understanding of the underlying principles. Although implicit, recasts were effective in fostering comprehension

through nuanced corrections, whereas clarification requests frequently resulted in confusion. The second theme, learning engagement and comfort, reflects the participants' comfort level in engaging with feedback. Participants who received metalinguistic and recast feedback expressed a high level of comfort, frequently engaging with the instructor and asking questions. Nevertheless, the participants in the clarification request group occasionally experienced hesitancy as a result of the ambiguity of the feedback, and those who received explicit correction were less likely to engage. Finally, long-term retention refers to participants' confidence in their ability to prevent future errors based on the feedback they have received. Participants perceived metalinguistic feedback as the most effective method for long-term retention, believing that understanding the norms would aid them in avoiding repeated errors. Recast feedback also aided retention, as participants were able to recall the corrections after hearing them in natural conversation. Nevertheless, the efficacy of clarification requests was contingent upon the participant's capacity to self-correct, and explicit correction raised concerns regarding long-term retention.

Discussion

The findings of this study support those of previous research (e.g., Lira-Gonzales & Nassaji, 2023; Liu & Hwang, 2024; Lyster, 2004; Lyster & Saito, 2010), which showed that learners paid greater attention to prompts. The ability for learners to more effectively change their output may be one reason why prompts are preferable to other sorts of CF. According to Swain (1995, 2005), learners are able to become more self-aware of their language issues through the use of adjusted output, which in turn aids in the development of both second and foreign language skills.

The current study also builds on the foundational work of scholars who have explored the spectrum of CF strategies. Metalinguistic clues are clearer than recasts, which are more implicit, according to Lyster and Saito (2010). It was found that metalinguistic feedback and clarification requests, which are at the explicit end of the range, were better at improving productive accuracy than explicit correction. The ability of feedback to engage learners' cognitive and metacognitive processes is as important, if not more so, in determining CF's effectiveness as its explicitness. CF allows learners to cognitively compare their interlanguage with the input, as Ellis (1994) contended. This notion is especially pertinent to input-oriented strategies like explicit correction and recasts. However, EFL learners may not have as many chances to check their work against correct forms if they are using output-oriented strategies, such as prompts that do not give clear examples of what the target should look like (Lyster et al., 2013). The current study's findings suggest that prompts, when designed to elicit active engagement, can overcome this limitation by encouraging learners to self-correct and internalize the target structure.

The findings further emphasize how crucial interaction is to learn L2 grammar. According to Mackey (2012), interaction usually includes utterance modification and feedback, giving students the chance to improve their language output. This is needed to learn complicated syntactic rules, like the *that*-trace filter, which asks students to look at minute differences in sentence structure. The results of this study also support Loewen's (2020) claim that interaction helps learners internalize complicated rules by providing feedback adapted to their present level of knowledge. To maximize the advantages of CF, teachers might establish a setting

where students obtain input and output opportunities by including metalinguistic feedback and clarification requests into communicative activities.

One of the most important outcomes of this study is that it shows that metalinguistic feedback and requests for clarification can lead to deeper cognitive involvement than direct correction. In both groups, participants consistently noted that the feedback encouraged them to actively recreate the target structure and critically reflect on their errors. One participant, for example, reported that it was easier for him to relate the feedback to what he already knew. This supports the claim made by Ellis et al. (2006) that metalinguistic feedback promotes the growth of explicit knowledge, which is necessary for grasping intricate grammatical rules. According to Zhao and Ellis (2022), interactive feedback strategies like prompts and explanation requests result in better levels of uptake and repair during communicative activities. This is consistent with the clarification request group's emphasis on self-correction. These strategies seem to encourage a deeper internalization of the goal form by making students actively interact with the input instead of passively absorbing errors. Prompts, according to Lyster and Ranta (1997), help students identify interlanguage gaps and provide corrected output, which is an essential step in increasing accuracy.

The qualitative data also highlighted the motivating advantages of feedback that promotes student autonomy. Participants in the metalinguistic and clarification request groups often felt empowered by their ability to solve problems independently. "I felt like I could figure it out myself instead of just being told the answer when I was asked to explain my mistake or given a hint about the rule," said one participant. This sense of agency likely influences two important aspects of language acquisition: increased motivation and self-efficacy (Liu & Hwang, 2024). Participants in the explicit CF group, on the other hand, complained about the lack of involvement that this type of feedback demanded. According to a number of participants, receiving the right response did not make it clearer to them why their initial attempt was flawed. This opinion is in line with critiques made in other studies about the shortcomings of explicit correction, which frequently ignores the root causes of mistakes (e.g., Ellis et al., 2006; Li, 2010). The comparatively low performance of this group on the WPT suggests that explicit correction may leave learners unable to translate declarative information into procedural abilities if it does not promote cognitive processing. Reformulations like explicit correction, according to Sheen and Ellis (2011), restrict learners' ability to actively interact with the feedback since they offer input but do not always generate output.

The function of feedback in raising metacognitive awareness is another important finding from the qualitative data. During writing assignments, participants in the metalinguistic and clarification request groups often reported feeling more aware of their mental processes. As one example, one participant said, "I began paying more attention to whether I was using *that* appropriately in my sentences after receiving feedback. It helped me recognize that I had been unconsciously committing the same error." It takes a deep understanding of language patterns to master complex syntactic phenomena like the *that*-trace filter, which often requires EFL learners to suppress contradictory feelings based on their first language or structures they have already learned in a second or foreign language (White, 2018). Metalinguistic and clarification request feedback tend to help the development of metacognitive strategies that are necessary for learning a language on your own by pushing students to think about their mistakes and other ways of putting things. This result is in line with Iizuka and Nakatsukasa's (2020) findings that

feedback that promotes active participation can result in long-lasting gains in implicit and explicit knowledge. Swain (2005) also argued that output-focused CF, like prompts, stimulates cognitive functions, such as finding gaps and making changes to output, both of which are beneficial for improving accuracy. Recasts were helpful for certain students despite being indirect and non-intrusive, but because they were implicit, they could cause inattention (Cheng et al., 2025; Loewen & Nabei, 2007). Overall, these results show that the effectiveness of CF extends beyond its explicit or implicit nature, as it also fosters learner participation and self-correction.

Nevertheless, the results emphasize the difficulties in putting into practice successful CF strategies in actual classroom settings. Cheng et al. (2025) noted that disparities between teachers' attitudes and practices might hinder the usefulness of feedback. This discrepancy emphasizes the necessity of professional development programs that provide educators the skills and self-assurance they need to successfully incorporate a variety of CF strategies. In order to close this gap and improve the standard of language education, CF-focused training programs may be essential. To optimize its impact, CF needs to be customized to the unique demands of learners and the intricacy of the target structure (Lira-Gonzales & Nassaji, 2023).

Finally, the results revealed that metalinguistic feedback and asking for explanations are the two best approaches to improving productive accuracy in acquiring the *that*-trace filter. These forms of feedback promote deeper comprehension and make it easier for students to internalize intricate grammatical rules by pushing them to critically interact with their mistakes. The qualitative data adds to these conclusions by showing how feedback that encourages learner autonomy can help with metacognition and motivation. However, resolving issues with teacher preparation and classroom implementation is necessary to fully realize the promise of these strategies. This research shows how important it is to take a balanced approach that combines rigorous theory with real-world application, since the field is still having trouble figuring out how to best use CF. To learn more about how to help EFL learners understand difficult syntactic phenomena like the *that*-trace filter, more research should look into how different types of feedback, learner characteristics, and teaching situations affect each other.

Conclusion

The findings suggest some pedagogical implications for language teaching methodologies and teacher training courses. Correcting EFL learners' oral errors is beneficial, and teaching teacher trainees how to provide CF is crucial. This study suggests encouraging teachers to use CF, especially metalinguistic feedback and clarification requests, to address EFL learners' grammatical errors. Additionally, training teachers to effectively use CF is of vital importance. Before that, it should be considered that the current research was conducted with intermediate learners in an EFL classroom context. Therefore, the context and setting involved in this study somewhat limits the generalizability of the findings. Other research contexts (e.g., L2 contexts), settings (e.g., laboratory settings), age groups (i.e., younger or older students), proficiency levels (e.g., advanced learners), and language aspects (such as vocabulary or pronunciation learning) may result in different outcomes.

Although the researcher attempted to address some limitations of previous studies, such as sample size and employing different types of implicit and explicit CF, it still has some limitations. First, the time allotted for the study was relatively short, which limited data

collection. Given more time, we could have administered a delayed post-test one month after the treatment, potentially yielding more valid results. Correctly answering the test items right after the treatment doesn't always mean that students have mastered the intended structure. Second, the researcher worked as the teacher in this study, which may have influenced the effectiveness of the CF. This raises a possible limitation regarding the study's pedagogical implications. It is not obvious whether the same effects of CF would be found with the class's regular teachers. Nevertheless, such a researcher-as-teacher arrangement was necessary since the researcher designed the tasks, knew how to provide the required feedback for the experimental groups, and was more familiar with the instructional materials than anyone else. Third, while all individuals in the CF groups had the opportunity to complete a task involving the target structure, those who did not make any errors did not receive feedback. Due to this, it remains uncertain whether they processed and benefited from the feedback given to other learners. In other words, it is not clear whether CF works differently for addressees and hearers or not. Finally, all participants in the study were male EFL learners, since the researcher had no access to classes with female students. Consequently, it is uncertain whether gender significantly influences the effectiveness of CF. Despite these limitations, this study may still contribute to our understanding of the effectiveness of explicit and implicit feedback on grammar learning.

More studies should explore phonological, syntactic, and morphosyntactic elements of English or other languages to confirm the conclusions. Because L2 proficiency may impact CF performance, it is vital to study it. Research shows that explicit CF benefits low-level learners more than implicit CF, whereas both help higher-level students. We might learn more about this issue by studying how proficiency interacts with structure kinds, CF types, and cognitive variables like working memory capacity.

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References

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Bryfonski, L., & Ma, X. (2020). Effects of implicit versus explicit corrective feedback on mandarin tone acquisition in a SCMC learning environment. *Studies in Second Language Acquisition*, 42(1), 61–88. <https://doi.org/10.1017/S0272263119000317>
- Cheng, X., Zhang, L. J., & Yan, Q. (2025). Exploring teacher written feedback in EFL writing classrooms: Beliefs and practices in interaction. *Language Teaching Research*, 29(1), 385–415. <https://doi.org/10.1177/13621688211057665>
- Ellis, R. (1994). A theory of instructed second language acquisition. In N. C. Ellis (Ed.), *Implicit and explicit learning of languages* (pp. 79–114). Academic Press.
- Ellis, R., Loewen, S., & Erlam, R. (2006). Implicit and explicit corrective feedback and the acquisition of L2 grammar. *Studies in Second Language Acquisition*, 28(2), 339–368. <https://doi.org/10.1017/S0272263106060141>
- Fu, M., & Li, S. (2022). The effects of immediate and delayed corrective feedback on L2 development. *Studies in Second Language Acquisition*, 44(1), 2–34. <https://doi.org/10.1017/S0272263120000388>
- Goo, J. (2012). Corrective feedback and working memory capacity in interaction-driven L2 learning. *Studies in Second Language Acquisition*, 34(3), 445–474. <https://doi.org/10.1017/S0272263112000149>
- Ionin, T., & Montrul, S. (2019). Understanding second language acquisition of wh-movement: Evidence from English and Spanish. *Linguistic Approaches to Bilingualism*, 9(2), 185–218. <https://doi.org/10.1075/lab.18025.ion>
- Iizuka, T., & Nakatsukasa, K. (2020). Implicit and explicit corrective feedback and feedback exposure conditions. *Instructed Second Language Acquisition*, 4(1), 3–48. <https://doi.org/10.1558/isla.38113>
- Li, S. (2010). The effectiveness of corrective feedback in SLA: A meta-analysis. *Language Learning*, 60(2), 309–365. <https://doi.org/10.1111/j.1467-9922.2010.00561.x>
- Li, S. (2014). The interface between feedback type, L2 proficiency, and the nature of the linguistic target. *Language Teaching Research*, 18(3), 373–396. <https://doi.org/10.1177/1362168813510384>
- Lira-Gonzales, M. L., & Nassaji, H. (2023). The differential effects of focused and comprehensive corrective feedback on accuracy of revision and new writing. *The Canadian Modern Language Review*, 79(1), 38–58. <https://doi.org/10.3138/cmlr.2021-0061>
- Liu, L. A., & Hwang, G. J. (2024). Effects of metalinguistic corrective feedback on novice EFL students' digital game-based grammar learning performances, perceptions and behavioural patterns. *British Journal of Educational Technology*, 55(2), 687–711. <https://doi.org/10.1111/bjet.13400>
- Loewen, S. (2020). *Introduction to instructed second language acquisition* (2nd ed.). Routledge.
- Loewen, S., & Nabei, T. (2007). Measuring the effects of oral corrective feedback on L2 knowledge. In A. Mackey (Ed.), *Conversational interaction in second language acquisition* (pp. 361–377). Oxford University Press.
- Lyster, R. (2004). Differential effects of prompts and recasts in form-focused instruction. *Studies in Second Language Acquisition*, 26(3), 399–432.
- Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communicative classrooms. *Studies in Second Language Acquisition*, 19(1), 37–66. <https://doi.org/10.1017/S0272263197001034>
- Lyster, R., & Saito, K. (2010). Oral feedback in classroom SLA: A meta-analysis. *Studies in Second Language Acquisition*, 32(2), 265–302. <https://doi.org/10.1017/S0272263109990520>
- Lyster, R., Saito, K., & Sato, M. (2013). Oral corrective feedback in second language classrooms. *Language Teaching*, 46(1), 1–40. <https://doi.org/10.1017/S0261444812000365>
- Mackey, A. (2012). *Input, interaction, and corrective feedback in L2 learning*. Oxford University Press.
- McDonough, K. (2005). Identifying the impact of negative feedback and learners' responses on ESL question development. *Studies in Second Language Acquisition*, 27(1), 79–103. <https://doi.org/10.1017/S0272263105050047>
- Öztürk, Y. (2023). The effect of delayed and immediate oral corrective feedback on L2 pronunciation in emergency distance education. *Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi*, 13(1), 573–587. <https://doi.org/10.30783/nevsosbilen.1230037>
- Sheen, Y., & Ellis, R. (2011). Corrective feedback in language teaching. In Hinkel, E. (Ed.), *Handbook of research in second language teaching and learning: Volume II* (pp. 593–610). Routledge.
- Silpachai, A., Neiriz, R., Novotny, M., Gutierrez-Osuna, R., Levis, J. M., & Chukharev, E. (2024). Corrective feedback accuracy and pronunciation improvement: Feedback that is 'good enough'. *Language Learning & Technology*, 28(1), 1–16. <https://doi.org/10.125/73582>
- Suzuki, W., Nassaji, H., & Sato, K. (2019). The effects of feedback explicitness and type of target structure on accuracy in revision and new pieces of writing. *System*, 81, 135–145. <https://doi.org/10.1016/j.system.2018.12.017>

- Swain, M. (1995). Three functions of output in second language learning. In G. Cook, & B. Seidlhofer (Eds.), *Principles and practice in applied linguistics: Studies in honor of HG Widdowson* (pp. 125–144). Oxford University Press.
- Swain, M. (2005). Verbal protocols: What does it mean for research to use speaking as a data collection tool? In M. Chaloub-Deville, M. Chapelle, & P. Duff (Eds.), *Inference and generalizability in applied linguistics: Multiple perspectives* (pp. 97–114). John Benjamins.
- White, L. (2018). Wh-movement and second language acquisition: Universal Grammar and parameter resetting. *Second Language Research*, 34(3), 289–313. <https://doi.org/10.1177/0267658317750846>
- White, L. (2020). The role of Universal Grammar in second language acquisition. *Annual Review of Applied Linguistics*, 40, 115-131. <https://doi.org/10.1017/S0267190519000183>
- Yousefi, M., & Nassaji, H. (2024). The impact of corrective feedback on L2 pragmatics production in face-to-face and technology-mediated settings. *Language Teaching Research Quarterly*, 39, 305–328. <https://doi.org/10.32038/ltrq.2024.39.19>
- Zhao, Y., & Ellis, R. (2022). The relative effects of implicit and explicit corrective feedback on the acquisition of 3rd person -s by Chinese university students: A classroom-based study. *Language Teaching Research*, 26(3), 361–381. <https://doi.org/10.1177/1362168820903343>