Effects of Teacher Response on Learners' Writing Development, Ideal L2 Writing Self, and Writing Engagement

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Research on responding to students' writing in the second language (L2) domain has grown enormously over the past twenty years and has expanded to include studies that examine how teacher responses affect language learners' affective states. Following this line of research, the current study investigated the effect of different types of teacher response on L2 learners' writing development as well as their ideal L2 writing self (IL2WS) and writing engagement. A total of 103 intermediate students of four intact classes were recruited, each receiving either feedback, feedforward, feedback and feedforward, or no response. Participants received their respective responses on five writing assignments, completed the IL2WS questionnaire and Writing Engagement Scale, and wrote two assignments as pretest and posttest. Data analysis indicated that all three experimental groups developed their writing proficiency from pretest to posttest. It was found that the Feedback+Feedforward group performed significantly better than all other groups, and the Feedback and Feedforward groups could outperform the Control group but not each other. Moreover, the results showed that groups receiving feedforward alone and in combination with feedback improved in terms of IL2WS and engagement. These results imply teachers should be familiarized with the concept of feedforward and encouraged to employ feedforward in tandem with feedback to help learners make greater learning gains.

Keywords: feedback, feedforward, L2 writing engagement, ideal L2 writing self, language learners

INTRODUCTION

Given the complexities of written discourse and the requirement to coordinate many cognitive and linguistic processes in second language (L2) writing, L2 teachers have a

difficult task instructing learners how to appropriately convey their intentions in writing. The act of teaching writing involves the dual process of imparting information to the learners (e.g., by providing samples) and responding to their understanding of information as reflected in their writing performance. One way to describe teachers' response to students' writing is feedback. Theoretically, feedback provision receives support from frameworks such as the Noticing Hypothesis (Schmidt, 1990) for the facilitative role it plays in helping learners notice the gap between the target language and their interlanguages. Also, the relative efficacy of providing feedback is shown by empirical research conducted on various aspects of feedback, including scope (focused vs. comprehensive) (Lee, 2020), source (teacher vs. peer) (Elfiyanto & Fukazawa, 2021), and type (direct vs. indirect) (Kim & Bowles, 2019), to name a few. However, despite the overall convincing theoretical and empirical evidence in support of feedback provision, it is not without criticisms (Kang & Han, 2015). Scholars have expressed their concerns about students' difficulty applying feedback to make changes to their work (Winstone & Carless, 2020), using feedback on subsequent assignments (Scott et al., 2011), or engaging affectively with the feedback provided (Tsao, 2021). Thus, in recent years, the research focus on L2 feedback has shifted from a concern over feedback effectiveness to how it can be made more effective (Li & Zhang, 2022).

To address this issue, scholars have attempted to transform responses to students' writing by introducing the concept of feedforward, understood as giving "the learner constructive advice about how to improve in the future" (Wolstencroft & de Main, 2020, p. 2). Feedforward is often associated with Hattie and Timperley (2007), who proposed it constitutes one dimension of feedback, answering the question "Where to next?". Therefore, rather than concentrating on the flaws in the students' work, the goal of this kind of response is to offer suggestions that pave the way for improved performance in the future (Dulfer & Akhlaghi Koopaei, 2021). By definition, feedforward is timely and future-oriented in association with a future task (Webb & Moallem, 2016), enabling tutors to provide students with more excellent help and give them the tools they need to use the feedback to advance their learning (Wolstencroft & de Main, 2020). However, due to its novelty in the domain of L2 writing, feedforward has not been investigated as thoroughly as feedback. Therefore, research is required in this area to find whether feedforward exerts any influence on L2 learners' writing progress.

Aside from L2 teachers' writing response, learners' psychological factors can influence "the extent to which [learners] notice gaps in their knowledge, the aspects of language they pay attention to, and, consequently, how they exploit the learning opportunities provided by writing" (Kormos, 2012, p. 400). Of the psychosocial factors that can determine the degree to which learners are prepared to devote time and energy to the writing process are L2 writing engagement and the ideal L2 writing self (IL2WS). The two constructs are closely interrelated (Yin, 2018). While motivation consists of private psychological factors, engagement consists of observable behaviors (Reeve, 2012). Understanding L2 learners' motivation and engagement towards writing is of utmost importance because the extent to which learners enjoy these emotional states determines what kind of activities they will undertake, how proactively they will attend to various phases of the writing process, and to what extent they will exploit their attentional and

cognitive resources (Kormos, 2012). Although L2 writing research has abundantly focused on the efficacy of teacher responses in developing L2 learners' writing ability (e.g., Bitchener & Storch, 2016), empirical evidence indicating how L2 writing responses motivate and engage students in EFL contexts is scarce (Yu et al., 2019).

In light of the assumptions mentioned above about the role of different writing response types as well as the affective factors in L2 writing development, the aim of the current study is twofold. First, as the comparative effect of these two types of writing response on learning quality is still unknown, this study explores whether writing response types (i.e., feedback, feedforward, feedback+feedforward) can differentially affect L2 learners' writing performance. Moreover, motivation and engagement are known as predictors of successful language learning. Nevertheless, since these components are domain-specific, students' motivation and engagement in the domain of L2 writing may differ from those in learning other language skills (Zhang & Guo, 2012). Besides, these emotional factors are subject to the impact of external factors, such as feedback type (Yu et al., 2019). Given these, the study's second goal is to examine whether writing responses may affect students' levels of L2 writing engagement and IL2WS.

LITERATURE REVIEW

Feedback and Feedforward

Race (2010) suggests that assessment follows two purposes. Firstly, it checks on the learners' progress. In this sense, assessment is judgmental and is carried out on students' previous performance. As such, we can draw a parallel between this sense of assessment and feedback, defined as "an indication to the learner that his or her use of the target language is incorrect" (Lightbown & Spada, 1999, p. 172). According to Ellis et al. (2006), feedback involves 1) pointing out that an error has been committed, 2) providing the correct target form, and 3) giving metalinguistic information on the intended form or any combination of these. Previous research studies have explored feedback from various perspectives. For example, some have examined whether some types of feedback –e.g., direct vs. indirect– are more efficient than others (e.g., Kim et al. 2020). Another group of studies has delved into how different error types respond to various types of feedback (e.g., Morsali, 2014). Still, a third strand of studies has sought the answer to the question of who should provide the feedback (e.g., Saeli & Cheng, 2021). Yet, these studies deemed learners as passive recipients of feedback, ignoring the fact that students are agents who can assume responsibility for their learning and regulate their learning behavior (Xu & Wang, 2022).

The second purpose of assessment, known as feedforward, pertains to students' future performance and signposts ways through which they can enhance their performance. As a relatively new term in institutional discourse, feedforward refers to information that informs where students are positioned relative to the desired state and what has to be done to reduce the discrepancy (Hendry et al., 2016). It includes phrasing commentary so that it gives learners the information they need to improve on subsequent tasks (Gibbs & Simpson, 2004). Feedforward denotes a new way of implementing feedback. Being rooted in a socio-constructive perspective, feedforward enjoys more robust theoretical underpinnings than feedback. The fundamental tenet of feedforward is

students' agency. Accordingly, feedforward presupposes learners' ability to proactively seek feedback, make judgments, and act on them (Reimann et al., 2019). This requires a milieu wherein teachers enter into a dialogue with students, listen to their struggles with feedback, and assist them with promoting practical strategies to improve learning (Carless & Boud, 2018). As such, feedforward contrasts with feedback, which belongs to the transmission-focused feedback paradigm, with minimal interaction reminiscent of teacher-focused approaches (Winstone & Carless, 2020). Furthermore, whereas feedback describes writing responses on learners' past actions and concentrates on spotting and amending mistakes that had already happened, the principle of feedforward is based on the positive developmental message that advocates learners' capacity to construct knowledge and progress in the future (Rysdam & Johnson-Shull, 2016). Table 1 contrasts the key features of feedback and feedforward.

Table 1
Characteristics of feedback and feedforward (adopted and adapted from Dulfer and Akhlaghi Koopaei, 2021)

Feedback	Feedforward
Focuses on the past	Focuses on the future
Affirms what the learner already knows	Suggests what the student needs to learn
Corrects misunderstanding	Builds knowledge
Makes evaluative judgment	Makes non-judgmental description
Informs the students about current progress	Promoting strategies to improve learning
Tends to be static	Tends to be expansive
Provided summatively as a product	Provided formatively as a process

Various conceptualizations of feedforward have been proposed in recent years, some of which have been contested (for a brief review, see Reimann et al., 2019). Also, the relevant literature shows feedforward has been implemented diversely through using exemplars (Carless & Chan, 2017), discussing assessment rubrics/criteria (Walker & Hobson, 2014), and practicing self-/peer-assessment using checklists (Murphy & Barry, 2015). Feedforward was operationalized in this study as comments provided to students on how to improve their upcoming assignments. For instance, when a student failed to use discourse markers sufficiently, the teacher explained that the essay would have been stronger with more linking words to enhance the flow of meaning.

Previous Research on Teacher Responses to Learners' Writing

A handful of experimental and meta-analytic studies have accrued, exploring the potential role that instructor response plays in developing learners' writing ability (e.g., Bonilla Lopez et al., 2018; Soria et al., 2020). For example, van Beuningen et al. (2012) found that L2 learners' linguistic accuracy was improved in both revision and new writing assignments by direct and indirect unfocused corrective feedback (CF) and that this result was sustainable. Stefanou and Revesz's (2015) study did not demonstrate a definite advantage in providing metalinguistic information, but it did show that receiving direct feedback was more beneficial than receiving no feedback. Suzuki et al. (2019) discovered in a recent study that learners could benefit from both direct and indirect feedback in order to increase the accuracy of past perfect and indefinite articles. Karim and Nassaji (2020) compared three types of feedback to examine the effects of

feedback on the accuracy of L2 learners' written work: one type of direct feedback and two types of indirect feedback (i.e., underlining only versus underlining with metalinguistic cues). Based on newly written and revised pieces of writing, the results showed that all three feedback groups significantly improved their performance in revision tasks. The result of Bonilla López et al.'s study (2018) revealed that during text revision, learners' immediate grammatical and non-grammatical accuracy was improved by the use of metalinguistic codes and direct corrections. However, employing direct corrections had a longer-lasting benefit.

Feedforward studies, however, are incredibly scarce in the realm of L2 learning, though some might have actually provided feedforward under another name. Baroudi et al. (2023), for example, collected quantitative and qualitative data from pre-service teachers and found that utilizing feedforward for two academic semesters led to a significant improvement in their posttest scores for critical thinking and academic writing skills. Hendry et al. (2016) presented a study of an interactive teaching method that utilized assignment exemplars to provide students with feedforward. Their findings indicated that while the instructor's explanation of the exemplars was a crucial positive factor in improving students' performance, some students did not enhance their performance despite understanding the expected work quality.

Writing Engagement and Ideal L2 Writing Self

Engagement is an umbrella term that embraces learners' level of attention and interest in deploying their ability and the repertoire of learning strategies to progress (Zhang & Hyland, 2018). Engagement can be achieved if students are cognitively involved with, actively participate in, and affectively commit themselves to their learning (Chapman, 2002). Considering these features, Fredricks et al. (2004) have proposed a conceptual framework of engagement consisting of three interrelated components, namely cognitive, behavioral, and affective. Cognitive engagement describes how learners attend to and invest mental effort in learning and accomplishing tasks; behavioral engagement describes how actively students are involved in learning tasks and activities; and affective engagement points to students' emotional reactions to peers, instructors and learning activities. Although L2 writing has been extensively investigated over the past several decades, a few studies have focused on students' L2 writing engagement. For instance, Zheng and Yu (2018) investigated how lower-proficiency language learners engaged with instructor CF. They discovered that while these learners' affective engagement was relatively high, their behavioral and cognitive engagement was relatively low. In a similar vein, Yu et al. (2020) found that students' writing engagement and motivation are enhanced by peer feedback, scoring, and expressive feedback, whereas CF and process-oriented feedback decrease students' engagement and motivation. Yu et al. (2023) examined the effectiveness of three instructional practices and showed that a) the process-oriented approach induced student engagement, b) the product-oriented approach led to adaptive and maladaptive engagement and motivation, and c) the genre-oriented approach promoted adaptive engagement and motivation. Recently, Cheng and Zhang (2024) investigated L2 learners' engagement with feedback and found that teachers' systematic instruction, consisting of pre-, during, and post-feedback phases, effectively engaged participants

with peer feedback. Finally, Jin et al. (2024), addressing the relationship between student engagement with peer feedback and writing performance, found that postgraduate students' affective, behavioral, and cognitive engagement with peer feedback positively correlated with improved writing performance.

This study also investigated the effect of feedback and feedforward on learners' IL2WS, an important source of L2 writing motivation. IL2WS is associated with "an individual's hoped-for future self-concept in L2 writing" (Cheong et al., 2022, p. 101). In other words, it emphasizes the desired goal of becoming a competent writer in the target community and motivates learners to approximate their ideal self (Tahmouresi & Papi, 2021). A few research have looked into L2 writing development from the perspective of the IL2WS. Previous studies have shown that learners' writing performance is (in)directly facilitated by their ideal L2 self (Tahmouresi & Papi, 2021; Zhu et al., 2022). Among the studies, three have investigated the link between IL2WS and feedback. In their investigation into the relationship between IL2WS and writing performance, Zhan et al. (2023) discovered that feedback-seeking behavior (FSB) had a mediation role for mid- and high-achieving students. The ideal L2 self was identified as one of the positive predictors of FSB by Xu and Wang (2022) in a related study that examined the effects of five predictors on undergraduate students' FSB. Most recently, Zhang (2024) examined the connection between learners' FSB, L2 writing self, and teacher academic support. The researcher discovered that FSB was predicted by teacher academic support via the mediation of the ideal L2 self and ought-to L2 self. Though some scholars (e.g., Kormos, 2012; Lee et al., 2018) have contended that students' psychological states play a key role in L2 writing, research on the impact of teacher responses upon students' IL2WS and L2 writing engagement remains scanty. This is specifically true regarding IL2WS, whose role in L2 development has been scarcely explored in an EFL context (Papi, 2022). In fact, to the best of our knowledge, no research has been conducted to investigate how teacher responses affect learners' IL2WS.

Research Questions

1. What effect do different types of teacher response have on L2 learners' writing development?

2. How does the presentation of feedback, feedforward, and feedback+feedforward influence students' IL2WS and writing engagement?

METHOD

Participants

This study was conducted at BayaneBartar Education Center, a private center in Tehran, Iran. This large private organization offers academic English services, including video, in-person, and online courses for language learners who learn English for a variety of reasons, including employment, education, or migration. We selected this context because it gave us easy access to a sizable and varied group of intermediate learners studying English for communicative purposes. Convenience sampling (Rose et al.,

2020) was used to select students who announced their willingness to participate in this study. The participants consisted of 84 Iranian EFL learners who were native Persian speakers and whose age range was between 20 and 37 years (Mean = 27; *SD* = 3.8). Based on the center's proficiency test, the participants' level of proficiency was assessed as upper-intermediate (amounting to B2 based on the CEFR framework). They were drawn from four intact classes and, at the time of the study, they were participating in their classes twice a week for 2 hours each class to improve their interactional skills. They were randomly assigned to one of the four experimental groups: the Feedback+Feedforward (FB+FF) group (*n* = 21), the Feedback (FB) group (*n* = 20), the Feedforward (FF) group (*n* = 22), and the Control (C) group (*n* = 21). All classes studied four skills, as well as the subskills of grammar and vocabulary, during the course. The students' writing syllabus included essay writing (independent writing task). Regarding the instructor, she was a non-native English speaker who had taught English at intermediate and advanced levels for around four years.

Instruments

Questionnaires

Writing Engagement Scale (WES): This scale was developed by Rogers et al. (2022) to measure learners' writing engagement. The WES included 16 items that dealt with the behavioral (*n* = 4), cognitive (*n* = 4), affective (*n* = 4), and social (*n* = 4) dimensions of writing. The scale was slightly adapted in order to make the scale more appropriate for the purpose of the current study. For example, the statement "Working on this writing assignment was boring" was changed to "Working on writing assignments is boring." Every item was rated by participants using a 6-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree." The WES demonstrated an acceptable Cronbach's alpha of .81.

Ideal L2 Writing Self Questionnaire (IL2WS): This scale was used based on Han and Hiver (2018), who had adapted the scale from Taguchi et al. (2009) to measure participants' idealized self-perceptions as proficient L2 writers. Participants rated six items (e.g., *I can imagine myself studying in a university where all my writing is taught in English*) on a 6-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree." The IL2WS questionnaire also exhibited strong internal consistency (α = .89).

Design and Data Collection Procedures

A quasi-experimental design with one intra-subject factor was used (time, pretest and posttest) and one inter-subject factor (response type). The intervention of the study, which took place over a 12-week time span, included giving feedback, feedforward, or both on five texts written by students in three experimental groups. One week before starting the study, the first researcher met with the instructor of the groups, during which she received comprehensive instruction from the researcher on what to teach as well as how to provide feedback and feedforward. In week one, the participants were given a topic on which they wrote an essay (pretest) to check their homogeneity and to have a baseline. Participants were allotted 30 minutes to write the pretest text (200-250

words). They were also handed out the WES and IL2WS questionnaire in the first session of the course. The time allowed to complete the questionnaires was 10 minutes.

During the following ten sessions, all participants were asked to write a total of five assignments (one assignment every other session). The assignments started with writing an introductory paragraph, moving to writing a complete essay. The assignments were writing an introductory paragraph (Assignment 1), writing body paragraphs (Assignment 2), writing a concluding paragraph (Assignment 3), and writing two complete essays (Assignments 4 & 5). The topics of the assignments were chosen from the TOEFL Independent Writing questions. Students wrote their assignments in the class. The instructor then collected the texts and, based on the condition to which students had been assigned, either provided the respective responses (treatment groups) or no response (C group). Feedback consisted of writing comments on and correcting grammatical, structural, and content-related errors (e.g., *A number of students* ~~*was*~~ *late for class.* > *were*). Feedforward included giving comments on how to improve learners' future writing without correcting their error(s) (e.g., *'For the next assignment, you need to pay more attention to supporting sentences'* or *'I think the next step for you is to add more syntactic variety'*.). Finally, participants in the control group received a score on their assignment without any response.

After the treatment phase (session 12), participants were required to write an independent writing task (posttest) to assess any improvements in their writing skills. Both the pretest and posttest of writing an essay were scored based on the TOEFL iBT Independent Writing Rubrics. The rubric consisted of a list of criteria, such as organization, coherence, vocabulary, grammar, and clarity, on a scale of 0 to 5. The first and third researchers independently assessed all participants' essays using the rubrics. Their ratings were almost similar except for seven responses. For these responses, they checked the rubric together and resolved the disagreements through discussion, and their inter-rater reliability was .93. The participants were also administered the WES and IL2WS questionnaire.

FINDINGS

A summarized overview of the descriptive statistics for the IL2WS, L2 writing engagement, and writing scores is provided in Table 1. Preliminary analyses ensured that the data met the assumptions of linearity and homoscedasticity. The Shapiro-Wilk test results, all non-significant at $p > .05$, further confirmed the data's adherence to the normality assumption. Variance inflation factor values for all variables were notably above 1, ruling out concerns of multicollinearity (Pallant, 2013). Also, the data satisfied both the homogeneity of regression slopes and the equality of covariance matrices assumptions, making ANCOVA an appropriate choice for analysis (Huberty & Petoskey, 2000).

Table 1
Summary of descriptive analysis

	Test Score		IL2WS		L2 Writing Engagement	
Group	*M*	*SD*	*M*	*SD*	*M*	*SD*
Pretest						
FB	2.142	.792	3.889	.753	4.180	.425
FF	2.238	.830	3.715	.934	3.924	.642
FB+FF	2.285	.783	3.961	.394	3.822	.412
C	2.190	.679	3.629	.796	4.001	.417
Posttest						
FB	3.333	.658	4.025	.657	4.261	.499
FF	3.285	.783	4.182	1.029	4.331	.609
FB+FF	4.571	.676	5.468	.347	5.165	.170
C	2.238	.700	3.652	.709	4.035	.379

Note. FB = Feedback, FF = Feedforward, FB+FF = Feedback + Feedforward, C = Control

Three ANCOVAs were performed to determine the influence of the four groups on post-course scores for writing score, IL2WS, as well as L2 writing engagement, after accounting for their respective pre-intervention scores. Table 2 presents a detailed breakdown of the findings across the groups. For writing score, response type had a marked impact on participants' posttest scores, $F(3,79) = 42.589$, $p < .001$. For the IL2WS metric, ANCOVA revealed a statistically significant effect of response type on posttest scores, $F(3,79) = 37.427$, $p < .001$. Similarly, L2 writing engagement showcased significant group differences, $F(3,79) = 41.525$, $p < .001$. In essence, even after controlling for initial scores, there were pronounced differences in posttest scores among the groups across writing scores, IL2WS, and L2 writing engagement. This analysis accentuates the pivotal role of the group variable in shaping post-intervention results.

Table 2
Summary of ANCOVA analysis

		Sum sq	*df*	*F*	*Sig.*	Partial Eta Squared
Writing Score	Group	18.563	3	42.589	<.001	.618
	Writing Score Pre	5.472	1	12.554	<.001	
IL2WS	Group	31.342	3	37.427	<.001	.587
	IL2WS Pre	20.280	1	72.651	<.001	
L2 Writing Engagement	Group	18.082	3	41.525	<.001	.612
	L2 Writing Engagement Pre	4.407	1	30.361	<.001	

Given there were four conditions, further follow-up was required. A detailed post-hoc pairwise comparison was conducted to unpack the differences in posttest scores across the groups for each of the three variables. For the writing score, the FB+FF and C groups showcased a substantial difference, with a mean difference of 2.301 ($p < .001$). A notable contrast was also evident between the FB+FF and FF conditions ($p < .001$) as well as the FB+FF and FB groups ($p < .001$). Additionally, both the FB and FF groups' mean scores were significantly higher than the C group at $p < .001$. For the IL2WS posttest scores, significant pairwise differences were observed between several group pairs: FB+FF group outperformed all other groups at $p < .001$. Besides, the FF group

outperformed the C group (p = .005). Lastly, similar results were found for the L2 writing engagement, all at p < .001: FB+FF > FB, FF, C and FF > C. These findings are encapsulated in Table 3.

Table 3
Pairwise comparisons

	Writing Score		IL2WS		L2 Writing Engagement	
Group comparison	Diff	Sig.	Diff	Sig.	Diff	Sig.
FB+FF ↔ FB	1.190	<.001	1.394	<.001	1.076	<.001
FB+FF ↔ FF	1.270	<.001	1.120	<.001	.884	<.001
FB+FF ↔ C	2.301	<.001	1.592	<.001	1.217	<.001
FB ↔ FF	.080	.697	-.274	.098	-.193	.111
FB ↔ C	1.111	<.001	.198	.232	.140	.241
FF ↔ C	1.032	<.001	.472	.005	.333	.006

Note. FB = Feedback, FF = Feedforward, FB+FF = Feedback + Feedforward, C = Control

Paired-samples t-tests were performed for pretest and posttest scores to examine whether the groups had improved across the domains of writing scores, IL2WS, and L2 writing engagement (see Table 4). Besides, to assess the magnitude of changes observed within each group, effect sizes were calculated and interpreted based on the guidelines provided by Plonsky and Oswald (2014). Specifically, effect sizes around .40 were considered small, those around .70 were interpreted as moderate, and those at 1.00 or above were deemed large. The results of paired-samples t-tests showed that all experimental groups could significantly increase their writing scores over time with large effect sizes. Moreover, participants in the FF group [$t(21)$ = -2.600, p = .017, eta square = .567] and the FB+FF condition [$t(20)$ = -19.214, p < .001, eta squared = -4.193], demonstrated improved IL2WS. Finally, the same results were replicated for L2 writing engagement scores. Results indicated that feedforward provision alone [$t(21)$ = -3.223, p = .004, eta squared = -.703] and in combination with feedback [$t(20)$ = -14.590, p < .001, eta squared = -3.184] led to significant improvements in writing engagement scores.

Table 4
Paired samples t-test

Group	Variable	t	df	Sig. (2-tailed)	Effect Size	95% Confidence Interval	
						Lower	Upper
	Writing Score	-11.608	20	<.001	-2.533	-2.696	-1.874
FB+FF	IL2WS	-19.214	20	<.001	-4.193	-1.671	-1.343
	L2 Writing Engagement	-14.590	20	<.001	-3.184	-1.534	-1.150
	Writing Score	-7.278	19	<.001	-1.588	-1.531	-.849
FB	IL2WS	-.889	19	.385	-.194	-.457	.184
	L2 Writing Engagement	-.707	19	.488	-.154	-.323	.159
	Writing Score	-4.932	21	<.001	-1.076	-1.490	-.604
FF	IL2WS	-2.600	21	.017	-.567	-.842	-.092
	L2 Writing Engagement	-3.223	21	.004	-.703	-.669	-.143
	Writing Score	-.326	20	.748	-.071	-.352	.256
C	IL2WS	-.578	20	.570	-.126	-.107	.060
	L2 Writing Engagement	-.901	20	.378	.197	-.112	.044

DISCUSSION

Research question one pertained to the differential effects of teachers' different response types on the writing development of L2 learners over time and between groups. The results of the analysis showed an advantage for the three experimental groups. One plausible reason for this positive effect is that feedforward comments provided learners with clear guidance, helping them understand how to enhance their writing skills. This outcome aligns with Hattie and Timperley's (2007) assertion that effective feedback should include information on how to proceed with a given task. In the context of our study, the specific and directive nature of feedforward comments should have prevented participants from facing difficulties by explicitly outlining what constitutes effective writing and how they could attain their writing objectives. For instance, comments like "Add grammatically more advanced sentences such as compound, complex, and compound-complex" offered explicit guidance compared to more general feedback like "You have too many short sentences." Similarly, suggestions such as "To absorb your reader, you need to add an interesting opening. Therefore, consider using a hook that includes the topic" provided more actionable advice than simply stating "The introduction lacks a hook." These specific instructions served as a clear roadmap for participants, detailing precisely what needed improvement. Moreover, the instructional value of some feedforward comments, such as "An essential part of an introduction is the thesis statement representing your stance towards the topic," which provided participants with the learning experience, might have led to increased posttest scores. Overall, the clarity and specificity of the feedforward comments enabled learners to understand and apply the principles of effective writing, thereby improving their performance.

The results regarding the efficacy of feedback are consistent with those of earlier research (van Beuningen et al., 2012; Zhang et al., 2017), which found that feedback improved the writing ability of L2 learners, but contradicts the finding of some other studies (e.g., Sheen et al., 2009; Shintani & Ellis, 2013) that failed to show that feedback aids students in raising their writing quality. More specifically, Li and Vuono (2019) distinguished between focused and unfocused feedback, stating that the former concentrates on a small number of linguistic forms while the latter addresses a variety of structures. Although previous studies (e.g., Bitchener & Knock, 2010; Sheen, 2010) have demonstrated that learners who receive focused feedback can enhance their writing skills, our research also demonstrated that learning could occur when learners receive unfocused input, which covers a broad range of errors. Even though giving participants unfocused feedback strains their attention to focus while processing various structures, it has nevertheless worked as a catalyst to improve learners' posttest writing performance even though they may have been unable to identify any patterns in the feedback due to its comprehensiveness (Frear & Chiu, 2015). More specifically, it can be suggested that participants who, through corrective feedback, received explicit information about the errors have, according to Bitchener's (2001) framework, successfully a) attended to the feedback, b) noticed the gap between their output and feedback, c) understood the feedback, and d) compared the feedback in relation to their existing knowledge.

Our analysis also showed that learners' L2 writing scores were improved as a result of receiving both feedforward and feedback. This finding makes sense, considering that this group's participants profited from the positive impacts of feedforward and feedback remarks working in synergy. This result can be interpreted as follows: the feedback information provided in descriptive ways helped subjects to see their writing patterns and habits clearly (e.g., *I notice that your opening is too short*), and then the feedforward comment informed them how to modify those patterns in order to best serve their goal (e.g., *You need to add various sentences to make it an introductory paragraph*). One of the fundamental problems with feedback is that participants are left to figure out how to resolve the problem on their own in order to get the desired outcomes. However, when students receive feedforward, they become aware of why feedback is given and can utilize the suggestions to bridge the distance between their current performance and the desired learning outcome (Dulfer, 2021). This may also help to explain why subjects who received instruction based on a mixed feedforward-feedback technique did better than those who received instruction based only on feedback-, feedforward-alone, or no response. The results also demonstrated that test scores from the FB and FF groups were much higher than those from the C group, even though they did not differ from one another statistically. Given that participants were homogenous before the instruction and the significant improvement they made over time with small effect sizes, it can be claimed that the FB and FF groups enhanced their writing ability to a similar extent, resulting in an inconsequential difference in the posttest findings.

The questionnaire results revealed that after the intervention sessions, the feedforward (FF) group and the combined feedback plus feedforward (FB+FF) group exhibited higher scores for IL2WS and L2 writing engagement following the intervention sessions. Despite the mixed empirical evidence and theoretical debates on the impact of feedback on motivation (Fong et al., 2019), this study found that feedback FB tended to diminish students' IL2WS and their engagement in L2 writing. This outcome contrasts with previous studies (e.g., Duijnhouwer et al., 2012; Tang & Liu, 2018), which reported the motivational benefits of feedback on student writing. However, it aligns with other research (e.g., Lee et al., 2018; Zheng & Yu, 2018) that highlights the negative impact of feedback on writing motivation and/or engagement. This finding could be justified considering the cumulative negative experiences learners often associate with receiving feedback. Similar to most L2 writing research, and in line with Ellis's (2006) definition of feedback as responses to learner productions containing an error, feedback in this study was operationalized as teacher's comments focused mainly on learners' weaknesses and language-related problems. Consequently, participants' motivation in the FB condition, which had received comments only on their erroneous productions over five consecutive sessions, might have been negatively influenced. Besides, it can be inferred that the bulk of feedback highlighting shortcomings in participants' work has shifted their focus from pursuing their ideal selves to compensating for their lack of competence. While feedback can indeed drive learning gains by pushing learners towards more significant gains, it can simultaneously undermine their willingness to engage in writing activities (Cohen et al., 1999). Also, since affective factors moderate learners' attention to and processing of feedback

(Bitchener & Storch, 2016), the feedback provided in this study may have adversely affected participants' engagement levels. The nature of the feedback likely contributed to this outcome; participants were given unfocused feedback, resulting in their writing being inundated with red ink, indicating various types of errors. This overwhelming amount of correction likely left students both cognitively and emotionally overwhelmed, thereby diminishing their motivation and interest in developing writing competence. Said a different way, a writing class that promotes unfocused feedback can intimidate learners by demanding them to address numerous types of errors in each composition they produce (Lee, 2020). This unrealistic expectation can deter students from engaging with the writing process, ultimately impeding their development as writers.

Another relevant finding worth expanding is that participants' level of engagement and motivation in the FF group significantly improved throughout the intervention. This research finding mirrored the study of Zarrinabadi and Rezazade (2020), who found that feedforward, but not feedback, significantly improved learners' writing motivation. The beneficial effects of feedforward have also been attested by Fong et al.'s (2019) meta-analysis, which reviewed the research on feedback and motivation. Their results favored comments with instructional details on how to improve in the future (i.e., feedforward) as more supportive of motivation than those underscoring learners' unsatisfactory performance. There are several explanations for this finding. One explanation could be that the comments provided by the teacher depicted what participants had not acquired yet. Consequently, the comments might have helped them reshape their current writing competence. In this way, feedforward has helped learners construct their previously unachieved possible future performance (Dowrick, 1999). According to Fang (2023), by establishing goals for which students are likely to strive, feedforward improves the value learners attach to their L2 writing as well as the fascinating component of writing motivation (i.e., IL2WS). In fact, both feedforward and IL2WS are forward-pointing because they seek to lessen the distance between current performance and the desired goal. Hence, feedforward has a motivating effect when its promotion regulatory focus is preserved by a concern for achieving hoped-for performance (Jang & Lee, 2019). This finding could also be interpreted from the perspective of cognitive psychology. In this domain, feedforward is connected to the concept of homeostasis, namely the ability of an organism to regulate disequilibrium in order to achieve a steady state (Cannon, 1932). Conceiving motivation as "a process of energy mobilization that is integrated into specific goal-directed patterns" (Basso & Olivetti Belardinelli, 2006, p. 75), we can claim that the feedforward on participants' writing could have functioned as an indicator of the presence of a deviation, which subsequently motivated students to begin making the necessary adjustments with the aim of restoring the desired equilibrium. The improvement of participants' engagement in the FF group makes sense given that previous studies (Yin, 2018; Zhu et al., 2022) have shown that engagement and IL2WS are intertwined as the latter is an internal promotion-focused psychological element while the former is, at least partly, materialized through observable actions of the learners (Reeve, 2012). Thus, learners aspiring to become proficient L2 writers in the future have expectedly shown higher degrees of engagement with their writing tasks. The emotional effects of feedforward could also be justified by reference to self-

determination theory (Deci & Ryan, 2016). The theory stresses that effectance-relevant feedback, akin to feedforward in this study, equips learners with valuable information on what actions to take and how to respond in the future, and as such is a highly effective tool in boosting learner motivation.

Finally, regarding the effect that providing both feedback and feedforward have on participants' writing motivation and engagement, the findings revealed a differential change from pre- to posttest scores. Given the simultaneous positive effect of feedforward and the negative influence of feedback on learners' motivation and engagement, this finding may seem puzzling. For one thing, perhaps feedforward can cancel out the detrimental effect of feedback on learners' motivation by means of satisfying learners' need for competence through providing information that allows them to reach their desired selves. As Goldsmith (2015, p. 2) stated, "Feedforward helps people envision and focus on a *positive future*, not a *failed past* [emphasis added]. This finding agrees with Cen and Zheng's (2024) metanalysis results. Upon investigating research papers on the role of different feedback practices on L2 writing motivation, the authors concluded that feedback yields more favorable outcome when it is combined with feedforward to close the gap between the present and desired level of competence.

CONCLUSION

The findings of this study offer support for the effective role of teacher response to learners' writing. It appears that employing a combined feedback-feedforward strategy is more instrumental than a feedback- or feedforward-only strategy in helping learners successfully improve their L2 writing ability. As such, in responding to learners' writing, teachers might want to consider complementing the provision of feedback with feedforward to obtain more desirable results. This suggestion is based on the fact that, on the one hand, feedforward goals assist students in identifying the necessary next steps for their learning, and on the other hand, feedback helps them understand how they can adjust their previous efforts to achieve better performance in the given task (Reimann et al., 2019). This necessitates moving away from transmission feedback models in which the learner is viewed as a passive recipient of feedback knowledge.

The findings also showed that presenting feedforward alone, as well as accompanying feedback with information on the following objectives (i.e., feedforward), significantly improves learners' IL2WS and writing engagement. Considering the demotivational influence of providing feedback to instruct learners towards greater gains in learning and the threat it presents to learners' ego, it is reasonable to claim that feedback should be presented in tandem with feedforward to retain the beneficial effects of feedback on the performance of learners while at the same time canceling out its demotivational effect. Moreover, it is claimed that learners' initial perception determines (affective) engagement with feedback and their subsequent deployment of (meta)cognitive resources to understand the feedback (Saeli et al., 2023). Therefore, teachers who desire to optimize learners' engagement with feedback should take care of learners' initial perceptions and values.

This study has the following implications for writing instructors and teacher trainers. To create a stimulating environment where students can envisage their optimistic view of

the future and engage with the writing task, writing instructors can supplement the usual feedback they present with feedforward comments. Therefore, teachers are advised to prepare a list of phrases for feedforward comments to ensure learners receive relevant information on their performance. The findings also indicate that due to the positive effect that feedforward provision bears on learners' affective domain as well as writing development, the concept needs to be clarified by teacher trainers through workshops or professional development training.

As with all studies, this study has its limitations. First, caution should be exercised against the generalizability of the findings beyond the scope of the current study. For one thing, the study is limited to a small and homogeneous sample of less than 25 participants in each group. Thus, the generalizability of the findings could have improved had we employed a larger sample. Besides, Yoon and Polio (2007) have demonstrated that each genre is characterized by specific discourse and rhetorical features, complexity, lexis, and so forth. This being so, argumentative writing in this study may have limited the findings' generalizability to other genres.

Reflecting upon our research findings, we propose the following directions for future research. First, in this study, we did not explore whether the reason for the enhanced performance of the FF group was their successful uptake. However, given that past studies (e.g., Tang & Liu, 2018) have demonstrated that the level of successful feedback uptake affects the writing ability of L2 learners, we could infer participants' enhanced performance is partly attributable to their successful uptake. Then, future studies might examine whether feedforward uptake is an impacting factor in developing L2 writing ability. Furthermore, this study illuminated the effect of feedback, feedforward, and feedback+feedforward on two affective factors, namely engagement and motivation. Therefore, future research is suggested to examine how feedback approaches affect other individual difference factors involved in writing, such as self-regulation, language analytic ability, and willingness to write. Third, our study showed that feedback provision negatively influences learners' motivation. However, we should bear in mind that other types of feedback, such as dynamic feedback, which scaffolds learners' learning by providing codes, may have a motivational impact on learners as this type of feedback requires them to take responsibility for figuring out how to correct to their errors (Kurzer, 2023). As such, future studies are needed to explore the role of dynamic feedback on learners' motivation. Finally, it is assumed that there might be an interaction between the type of teacher response and the areas of writing performance responded to. Therefore, researchers are suggested to uncover which areas of writing are more amenable to a particular response type. Despite the limitations mentioned above, we hope our study makes an important contribution to the field by raising teachers' awareness about the impact of feedback, feedforward, and their combination on writing proficiency, motivation, and engagement of L2 learners' writing proficiency.

CONFLICTING INTERESTS

The authors declare that they have no conflicting interests.

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