

Online Teaching Dynamics: How Personality Traits and Feedback Methods Shape Learners' Writing and Self-Perception

Hamenaz Gholipour¹ , Davood Ghahramani^{2,*} , Hamed Barjesteh¹ 

¹Department of English Language, Am.C., Islamic Azad University, Amol, Iran.

²Department of English Language, Ga.C., Islamic Azad University, Garmsar, Iran.

*Corresponding author: ghahramani@iau.ac.ir

Original Research

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Abstract:

This mixed-method study investigated how EFL teachers' personality traits-specifically, extroversion and introversion-interact with recast and metalinguistic written corrective feedback and how this influences senior secondary students' self-esteem and writing skills. The study involved 104 participants in an online learning environment, including four EFL teachers and 100 senior secondary students. Students received corrective feedback from both extroverted and introverted teachers, specifically focusing on two types of feedback: recast and metalinguistic. Data were collected through self-reports and interviews and analyzed using statistical and qualitative methods, including multivariate analyses of variance (MANOVA), t-tests, and content analysis via SPSS and MAXQDA software. The results showed that while teachers' personality traits had no significant effect, corrective feedback notably influenced self-esteem and writing performance. This indicates that the feedback type is a more critical determinant in shaping EFL learners' success than the teacher's personality. Moreover, the interviews highlighted that students' preferences for explicit or implicit feedback varied based on individual needs and proficiency levels, further emphasizing the importance of tailoring feedback to meet the diverse needs of learners. This study offers new insights into the dynamic interplay between teacher and student interactions and student preferences and needs in designing corrective feedback interventions.

Keywords: Metalinguistic feedback; Online instruction, Personality traits; Recast; Self-esteem; Writing skills

Introduction

In English as a foreign language (EFL) settings, teachers are crucial in shaping students' learning experiences. Their teaching approaches, attitudes, and interactions with students profoundly influence learners' progress and motivation. Effective teaching is crucial for helping students acquire language skills and fostering a positive mindset toward learning. Recently, there has been an increasing focus on exploring the cognitive and non-cognitive factors that impact both *teaching effectiveness* and students' language outcomes. Cognitive factors, such as attention, memory, and problem-solving skills, affect how students process and retain a new language. On the other hand, non-cognitive factors-like motivation, emotional well-being, and self-confidence-are also essential for successful language learning. These factors are closely interconnected, as a teacher's power to build an engaging classroom can enhance cognitive and emotional growth, ultimately leading

to more successful language acquisition. As Goe (2007) defined, *teacher effectiveness* refers to students' learning progress, assessed through standardized evaluation methods. Various factors impact teacher effectiveness, including experience, motivation, qualifications, and professional advancement. Important teacher-related factors, including instructional quality, learner evaluation, classroom management, effective teaching strategies, teaching motivation, and knowledge, are indicators of teacher effectiveness (Osiesi, 2024). Scholars generally agree that teachers are crucial assets within the school environment, significantly affecting learners' academic achievement (Gyamfi et al., 2023), and teachers' attitudes and perceptions often shape these outcomes. The role of teacher characteristics, feedback, strategies, and the dynamic interactions between teacher and student in shaping language learning outcomes have been the focus of different research (Adams et al., 2020; Barjesteh et al., 2025; Gan et al., 2020; Hamre and Pianta, 2007; Ramadan Elbaoui Shaddad and Jember, 2024;

Sankalaite et al., 2023) in the field of EFL. For instance, Adams et al. (2020) suggested a model in which academic self-efficacy mediated the interplay between students' perceptions of feedback and academic performance. Similarly, Gan et al. (2020) investigated learners' feedback behaviors and preferences and their connection to self-efficacy. Additionally, Hamre and Pianta (2007) proposed a framework suggesting that the key factor in learning may not be the content teachers deliver but how they engage with their students. L2 professional literature proposed various additional interactive approaches to describe how teachers engage with their students, such as collaborative learning (Ferreira et al., 2024), socio-emotional advancement (Bardach et al., 2022), teacher and student relationships (Moyano et al., 2023), learners' needs and preferences (Kazemian et al., 2023), and reciprocal-Scaffolding (Sabzevari et al., 2024), to name but a few. One such participatory approach that deals with how teachers interact with their students is teachers' personality traits, which can affect learning outcomes in general and feedback techniques in particular (Kyllonen et al., 2014). While personality traits—specifically, extroverted and introverted teachers—bring different strengths to the classroom, the impact of such personality traits on student outcomes remains unclear. Some recent studies (Kim and Cho, 2020; Bloem et al., 2024; Paz-Baruch and Spektor-Levy, 2024) have also explored different teacher characteristics—such as gender, age, socioeconomic status, cultural background, and education level—as potential factors influencing learner achievement. Although personality traits are recognized as significant in teaching effectiveness, there is limited research on how these traits specifically affect student outcomes. Studies (Cheng, 2021; Noreen, 2019) have yielded mixed results. Some suggest that extroverted teachers who employ active teaching strategies like group work and discussions lead to better academic performance (Cheng, 2021). Other studies have found no significant relationship between personality traits and student outcomes (Noreen, 2019). These inconsistencies may be due to contextual factors other than teacher characteristics, such as teaching strategies, classroom environment, and the type of feedback the teacher provides. Alongside personality traits, online feedback techniques and virtual assessment strategies have grown in popularity, though research on their effectiveness remains mixed. Some studies have found positive effects of online recast and MCF on students' writing and learning skills (Liu and Zhou, 2018), while others report limited impact, especially when compared to face-to-face feedback (Ghaffar and Khairallah, 2021). The influence of online feedback from teachers with varying personality types remains underexplored, with a particular lack of research on secondary students. Despite reforms in Iranian secondary education, which emphasize teacher professional development and innovative pedagogical techniques (Rezaei et al., 2022), traditional methods still dominate, and the effect of teachers' personality traits on student outcomes is not well studied (Chalak, 2015). The complexity of the interaction between teacher characteristics, particularly personality traits, and feedback strategies has become a central topic in EFL research. However, despite the increasing interest in

this area, studies examining the combined effects of teacher personality traits and corrective feedback types remain limited. This research aims to bridge this gap by exploring how online EFL teachers' personality traits—specifically, extroversion and introversion—interact with using recast and metalinguistic written corrective feedback and how this influences senior secondary students' self-esteem and writing skills.

Review of the literature

Regarding the theoretical underpinning, this study incorporates insights from multiple theories, including social cognitive theory (SCT), trait theory of personality, and sociometer theory.

Social cognitive theory

In his SCT, Bandura (1996) highlights the dynamic relationship among personal, behavioral, and environmental constructs in the learning process. According to Bandura, learning takes place through both direct experiences and observational learning. In 2008, Bandura (2008) illustrated this concept using the framework of triadic reciprocal causation (see figure 1).

Figure 1 illustrates reciprocal determinism, demonstrating how three factors mutually affect each other. According to Social Cognitive Theory, individuals learn by observing others (modeling), with cognitive processes such as attention, retention, reproduction, and motivation playing pivotal roles. A key component of the theory is self-efficacy—the belief in one's ability to succeed—which significantly affects effort and perseverance. Social reinforcement and feedback further shape behavior, while individuals actively regulate their learning through goal-setting and self-reflection. This framework highlights the critical interplay between interaction and cognition in learning. SCT underscores the importance of observational learning, social experiences, and cognitive mechanisms in shaping behavior, positioning it as a flexible framework for understanding human actions (Lee and Tseng, 2024; Zhao et al., 2024).

Personality traits

The trait theory of personality, also known as the dispositional theory, was first introduced by Eysenck (1967). Eysenck described personality as a relatively stable and enduring organization of a person's character (conative behavior system), temperament (affective behavior system), intellect (cognitive behavior system), and physique (bodily structure and neuroendocrine makeup). This theory emphasizes identifying and describing stable traits that consistently shape an individual's thoughts, feelings, and behaviors over time and across different situations, forming the core of personality (32). Eysenck's model of personality highlights the concept of super-factors, also called traits. This model (figure 2) illustrates three constructs: *psychoticism* (P), *extraversion* (E), and *neuroticism* (N).

The E dimension spans introversion, marked by shyness and withdrawal, to extraversion, characterized by sociability and uninhibited behavior. Eysenck's theory emphasizes extraversion vs. introversion and emotional stability vs. neuroticism as the higher constructs. Introverts, often quiet

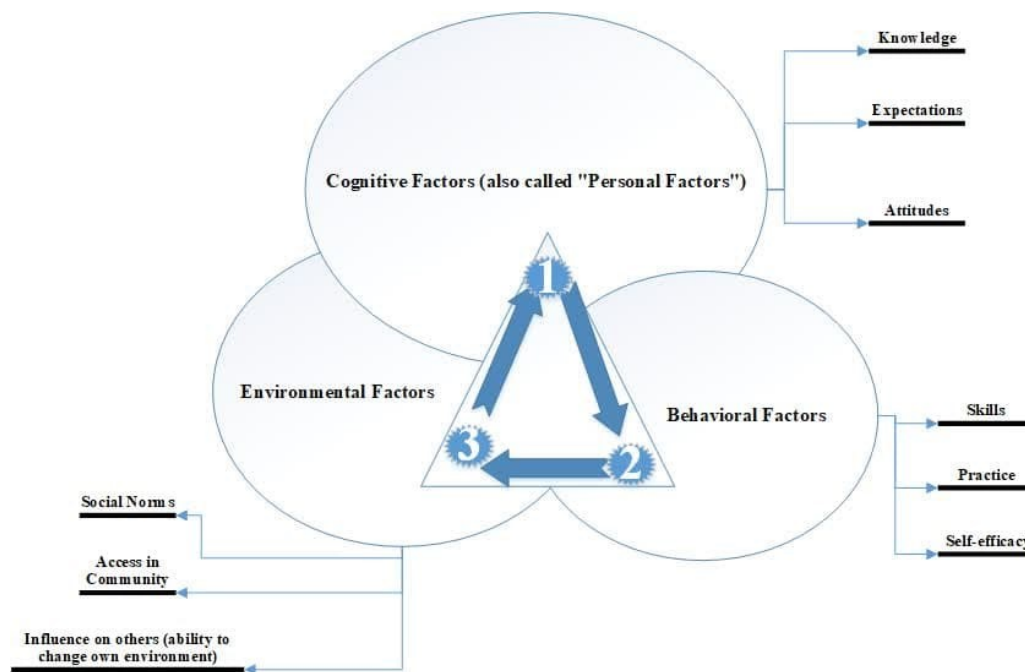


Figure 1. The triadic causation model for SCT.

and reserved, prefer solitude and deep connections, while extroverts are outgoing and socially competent. Introversion relates to knowledge-sharing and health (Moon et al., 2014), while extraversion involves optimism and social interaction (Pour and Taheri, 2019). These traits influence behaviors, including information-sharing in online communities (Deng et al., 2017), reflecting their importance in personality psychology.

Sociometer theory

Sociometer Theory, introduced by Leary and Downs (1995), suggests that self-esteem acts as a social gauge, monitoring one's social acceptance and inclusion level. Rosenberg (1989) suggested that self-esteem involves evaluating one's

self-concept by considering factors such as appropriateness, social comparisons, and self-attributions (Rosenberg, 1965). It shows that self-esteem serves as a cognitive framework that allows external stimuli to impact one's mood and behavior, either positively or negatively (Van Tuijl et al., 2018). It significantly impacts key life outcomes, such as improved social interactions, physical health, academic success, and effective coping strategies (Nguyen et al., 2019). Fluctuations in self-esteem reflect perceived threats or affirmations to one's social value. Self-esteem, defined as one's sense of worth, measures the degree of social acceptance within one's circle (Leary, 2005). Cameron and Anthony (2017) expanded on this theory, emphasizing two key aspects: (a) social acceptance and rejection experiences shape one's perception of self-worth and contributions as a social partner, and (b) higher self-esteem correlates with feeling more valued by others. Conversely, low self-esteem often leads individuals to question their relationship value, potentially fostering insecurities that affect future interactions.

The integration of theories within the context of this study

Integrating sociometer, social cognitive, and trait theory of personality Offers an all-encompassing framework for understanding second language acquisition. Sociometer Theory highlights the role of social acceptance in motivating learners, with self-esteem serving as a gauge for inclusion. In SLA, learners often seek to enhance their self-esteem through successful communication and positive feedback, boosting their engagement. SCT highlights the impact of observation, modeling, and self-efficacy, where positive social interactions, such as praise, enhance learners' confidence and motivation to practice. Trait Theory adds the role of individual personality traits, such as extraversion and openness, influencing how learners engage socially

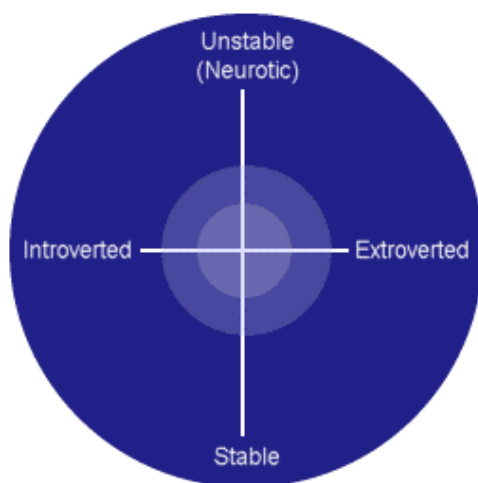


Figure 2. Eysenck's model of personality.

and benefit from feedback. These theories explain how personality, cognitive processes, and social dynamics interact in SLA. For example, extraverted learners are more likely to seek conversational opportunities and receive feedback reinforcing their self-esteem, while conscientious learners benefit from structured study habits. Social feedback allows learners to adjust goals based on their perceived progress and inclusion. The interplay of these factors emphasizes the critical role of personality, social dynamics, and cognitive processes in shaping language learning outcomes.

This study explored how teachers' personality traits, using the trait theory of personality, influence students' self-esteem and writing abilities. Grounded in social cognitive theory, it also examined how online teachers' personality traits and their use of recast and MCFs affect students' self-esteem and writing skills. SCT stipulates the interplay between individuals, their environments, and behaviors, highlighting how constructs like teacher personality and feedback practices shape students' cognitive processes in language learning. Self-esteem theory suggests that self-worth significantly influences motivation and performance. The study focused on how teachers' feedback practices impact students' self-esteem, comparing the effects of feedback from extroverted and introverted teachers. It aimed to understand how different feedback types affect students' self-perception and sense of value in language learning. The Sociometer Theory was also applied, positing that self-esteem reflects social acceptance and belonging. The study examined how changes in students' self-esteem were related to their perceptions of acceptance and value by their teachers. By integrating these theories, the study aimed to understand better the interplay between teacher personality, feedback practices, and students' self-esteem and writing development. Through the integration of these theoretical perspectives, the study aimed to provide a holistic analysis of the association between teachers' personality traits, their online feedback practices, and their students' self-esteem and writing abilities. The following research questions were therefore formulated:

RQ1: Do EFL teachers' personality traits (extroverted and introverted) significantly affect Iranian secondary students' self-esteem and writing skills when providing online recast and metalinguistic corrective feedback?

RQ2: What are teachers' perceptions of online classroom feedback type?

Instrument

Eysenck personality inventory (EPI)

EPI inventory assessed EFL teachers' personality traits (either extrovert or introvert). It consisted of twenty-one items, each assessing a specific aspect of extraversion. The items included in the inventory were carefully selected to capture different aspects of extraversion, such as sociability, enthusiasm, assertiveness, and enjoyment of social interactions. These items assessed both behavioral manifestations and subjective experiences related to extraversion. Participants were asked to indicate their response by ticking the appropriate box for each item, indicating "yes" or "no." The use of closed-ended items allowed for quick and easy inventory

completion, as participants did not need to write any English words but select their answers. Multiple studies (e.g., Barrett and Eysenck (1984), Eysenck et al. (1985), Sing (2014)) have supported the scale's reliability. In the present study, the reliability of the inventory was assessed in a pilot study with EFL teachers. The Cronbach's Alpha was run to estimate the reliability value. The estimated reliability value was .88, which was acceptable. Based on the scores obtained from the inventory, teacher participants were categorized as extroverted or introverted learners. Those who scored 12 or higher were classified as extrovert teachers, while those who scored 11 or lower were categorized as introvert teachers.

Self-Esteem scale (SES)

The Revised Rosenberg SES (Rosenberg, 1965) was utilized in this study to assess the participants' self-esteem levels. This widely used measure, consisting of ten items, has been employed for over four decades. Participant scores on the scale ranged from 10 to 40, with higher scores representing higher levels of self-esteem. The scale indicated satisfactory internal consistency, with a Cronbach's alpha reliability coefficient of .87. The SES questionnaire was chosen due to its ability to measure global self-esteem without cultural bias, making it suitable for content-free assessment in this study. Participants were asked to show their agreement level with the ten statements using a four-point Likert-type scale, where one represented "*strongly agree*" and four represented "*strongly disagree*". The reversed valence items (3, 5, 8, 9, and 10) were scored differently, with higher scores indicating higher self-esteem. A score range of 15 – 25 indicated high self-esteem, while scores below 15 reflected low self-esteem. The cultural appropriateness of the SES questionnaire for Iranian secondary students was also considered. The SES questionnaire has been widely used across various cultural contexts, and its lack of cultural bias has been reported in previous studies. However, two experts in TEFL were requested to check the scale's validity within the Iranian cultural context to ensure its appropriateness for Iranian secondary students. In order to have standardized administration procedures and ensure consistency across participants, administering the SES questionnaire involved providing clear instructions and guidelines to participants.

Pretest and posttest of writing

In order to assess the student's writing skills, two teacher-made writing tests were administered: pretest and posttest measures. The pretest required participants to write one or two paragraphs describing a picture within a word range of 100 – 120, while the posttest involved a similar picture description task. Both tests were timed with a duration of 35 minutes. A uniform scoring procedure was implemented for writing test papers, including the pretest and posttest, to ensure consistent and reliable scoring. Each paper was evaluated based on a set of assessment criteria, as outlined in Table 1.

Table 1. The assessment criterion for the writing tests.

	Component	Description
1.	Lexical Item	Assess participants' vocabulary knowledge and usage
2.	Plural morpheme	Evaluate understanding and correct usage of plural nouns
3.	Parts of speech	Examine grasp of different word types and their usage
4.	Tenses	Assess knowledge and mastery of verb tenses
5.	Sequence of tenses	Evaluate maintaining logical temporal relationships
6.	Word order	Focus on constructing grammatically correct sentences
7.	Articles	Evaluate the usage of definite and indefinite articles
8.	Adjectives	Assess the effective use of adjectives
9.	Prepositions	Examine the correct usage of prepositions
10.	Adverbs	Evaluate mastery and usage of adverbs
	Total	Maximum score achievable for all components

Methods

Participants

This study involved two groups of participants: teachers and students. The teacher group comprised four female EFL teachers selected from secondary high schools in Guilan, Iran. They were selected from a pool of 12 EFL teachers based on their self-reported personality types and evaluated using a personality trait inventory. Of the initial group, 8 (66.7%) identified as introverts and 4 (33.3%) as extroverts. Two introverted and two extroverted teachers were randomly selected to ensure a balanced representation. They were native Persian speakers, aged 35 – 45, with Master's degrees in TEFL. The introverted and extroverted teachers' language experience varied from 3 to 8 years ($M = 6.05$, $SD = 6.16$) and 4 to 12 years ($M = 8.07$, $SD = 7.16$), respectively. The second group (i.e., students) included 100 intermediate EFL learners. They were all female EFL learners aged 14 to 15 ($M = 14.29$, $SD = 7.31$). The sampling multistage was randomly selected from eight public schools in three districts to reduce the bias effect. To address the objectives, a sample of 385 Iranian EFL students were recruited as the subjects. An Oxford Placement Test was conducted to ensure homogeneity of the target group.

Procedure

This study explored the impact of teacher personality types (i.e., extroverted and introverted) and feedback methods (i.e., recast and metalinguistic) on EFL learners' writing skills and self-esteem. Four secondary school teachers—two extroverts and two introverts—were chosen, along with 100 homogeneous EFL students. The intervention included pretests and posttests for writing and self-esteem, supplemented by interviews for qualitative analysis. Two classes received recast feedback, in which teachers subtly corrected errors by reformulating learners' incorrect utterances. This approach aimed to foster learner autonomy and engagement by providing authentic input and opportunities for self-correction. The feedback was tailored to address specific linguistic challenges, enhancing implicit grammatical knowledge and accuracy. The other two classes received metalinguistic corrective feedback (MCF) involving explicit

error correction and grammatical explanations. Teachers highlighted errors and provided metalinguistic insights, encouraging learners to understand and internalize language rules. This method aimed to deepen learners' understanding of language structures and support active error correction. Both feedback types were delivered online to enable immediate interaction and personalized guidance. Post-intervention results were analyzed using statistical and qualitative methods. Recast feedback promoted implicit learning and engagement, while MCF facilitated explicit understanding of grammatical rules. Finally, a focused group interview was conducted to provide insights into participants' experiences and perceptions, highlighting the feedback's effects on writing and self-esteem. The results underscored the influence of teacher personality and feedback type on EFL learners' linguistic development and confidence.

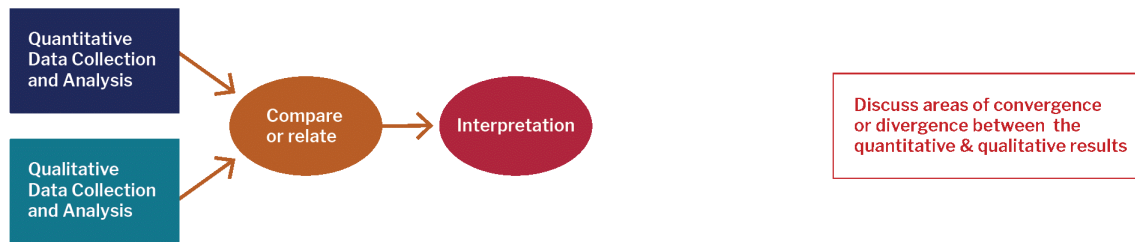
Research design and data analysis

This study investigated how EFL teachers' personality traits—extroversion and introversion—interact with recast and metalinguistic written corrective feedback and how this influences senior secondary students' self-esteem and writing skills. This was done through the use of explanatory sequential design. Notably, this study used a mixed-method design where the quantitative data analysis is followed up with qualitative data collection (See figure 3).

This design combined quantitative and qualitative methods to analyze the research questions comprehensively. Specifically, quantitative analyses, including t-tests, ANOVA, and MANOVA, examined the numerical data from inventories and pretest/posttest scores, identifying significant differences in students' self-esteem and writing skills based on teachers' personality types and feedback methods. This analysis was followed up with qualitative thematic analysis, which explored participants' perceptions, experiences, and attitudes regarding the feedback and its impact on their self-esteem and writing. Data was processed using SPSS (version 26) for descriptive and inferential statistical analyses to address the research questions. Thematic analysis, following Braun (2006) guideline and facilitated by MAXQDA software, revealed themes within the interview data, offering valuable insights into the qualitative dimensions of the

BASIC MIXED METHODS RESEARCH DESIGNS

Convergent Parallel Design



Explanatory Sequential Design



Exploratory Sequential Design



Figure 3. Adapted from Creswell (2014).

study.

Results

Analysis of statistical assumptions for normality of variables

Descriptive statistics comprising means and standard deviation were computed for the results of the SES and writing tests (See Table 2).

As shown in Table 2, the initial administration of the SES revealed minor differences in mean self-esteem scores across the four groups. These differences ranged from 0.08 points between the third group ($M = 18.68$, $SD = 4.70$) and the

fourth group ($M = 18.76$, $SD = 4.52$) to 1.32 points between the first group ($M = 18.92$, $SD = 5.90$) and the second group ($M = 17.60$, $SD = 5.43$). Similarly, Table 2 illustrates that the pretest writing scores also slightly differ. These ranged from 0.24 points between the third group ($M = 13.44$, $SD = 1.44$) and the fourth group ($M = 13.20$, $SD = 1.65$) to 1.04 points between the second group ($M = 12.40$, $SD = 2.44$) and the third group ($M = 13.44$, $SD = 1.44$). A skewness analysis was done by dividing the skewness statistic by its standard error. The resulting values fell within the acceptable range of $+2$ to -2 , suggesting that the data adhered to the normality assumption that Tabachnick and Fidell (2013) outlined. Furthermore, the level of measurement assump-

Table 2. The assessment criterion for the writing tests.

No.	Groups	Administration	Mean	N	SD
1.	Extrovert/Recast	Self-esteem 1	18.92	25	5.90
		Self-esteem 2	20.60	25	4.58
2.	Extrovert/Metalinguistic	Self-esteem 1	17.60	25	5.43
		Self-esteem 2	21.04	25	4.64
3.	Introvert/Recast	Self-esteem 1	18.68	25	4.70
		Self-esteem 2	20.68	25	3.99
4.	Introvert/Metalinguistic	Self-esteem 1	18.76	25	4.52
		Self-esteem 2	23.68	25	4.37
1.	Extrovert/Recast	Pretest writing	12.88	25	2.333
		Posttest writing	13.88	25	2.107
2.	Extrovert/Metalinguistic	Pretest writing	12.40	25	2.449
		Posttest writing	14.64	25	1.933
3.	Introvert/Recast	Pretest writing	13.44	25	1.445
		Posttest writing	14.52	25	1.262

tion for parametric tests was also met, as both self-esteem and writing scores were measured on a continuous scale.

Analysis of the first research question

A one-way ANOVA was run to check the differences among the groups regarding self-esteem (See Table 3).

The results of the ANOVA tests indicated no significant differences among the groups in the initial administration of the SES ($F(3, 96) = 0.333, p = 0.798$) or the pretest writing scores ($F(3, 96) = 1.241, p = 0.299$), as both p-values exceeded the significance threshold of $p \leq 0.05$. This indicates that the four groups were homogeneous regarding their self-perceived self-esteem and writing ability before the implementation of the specific treatments involving two types of corrective feedback. A multivariate analysis of variance (MANOVA) was conducted to analyze the data further and compare the four groups' self-esteem and writing scores. The groups were categorized based on the corrective feedback (recast versus metalinguistic) and the teachers' personality traits (introvert versus extrovert). Before running the MANOVA, Levene's test (i.e., Table 4) was performed to ensure the homogeneity of variances across the distributions.

Table 4 indicates that the group variances were similar in the second administration of the SES ($F(3, 96) = 0.317, p = 0.813$) and the writing posttest ($F(3, 96) = 2.460, p = 0.067$), with both p-values exceeding the 0.05 threshold. These findings supported the assumption of equal variances among the groups. Box's M test was conducted to test the equality of covariance matrices in the subsequent steps (see Table 5).

The test does not violate the homogeneity of covariance assumption ($F = 1.031$ and $\text{Sig} = 0.412 > 0.05$). After establishing the main assumptions of the parametric tests, MANOVA was conducted to test whether the mean differences among the four groups were significant for the SES and the writing test for the second administration (Table 6). The findings revealed that participants who received MCF performed better than those who received recast. Moreover, participants taught by introverted teachers using MCF outperformed those instructed by extroverted teachers who

employed the same feedback method. Similarly, participants who received recast CF from introverted teachers achieved higher scores than those who received recast CF from extroverted teachers. These results indicate that differences in self-esteem and writing test scores were influenced by the teachers' personality traits and the type of corrective feedback provided. The results of the multivariate test further indicated the following: (a) No statistically significant differences were observed among the self-esteem and writing scores of the four groups based on the teachers' personality traits (F Pillai's Trace (2, 95) = 2.68, $p = 0.073$, $\eta p^2 = 0.054$). (b) The type of corrective feedback had a statistically significant effect (F Pillai's Trace (2, 95) = 4.24, $p = 0.017$, $\eta p^2 = 0.082$). (c) There was no interaction effect between the teachers' personality traits and the type of corrective feedback (F Pillai's Trace (2, 95) = 1.05, $p = 0.351$, $\eta p^2 = 0.022$).

Paired sample tests were conducted to further analyze introverted and extroverted groups' progress based on the type of feedback received in their self-esteem scores.

As shown in Table 7, both groups demonstrated progress in their self-esteem by the end of the study. The mean difference between the first and second administrations of the SES for Group 1 (extrovert/recast) was 1.68 points. In contrast, for Group 2 (extrovert/metalinguistic), the mean difference was significantly higher at 3.44 points. The analyses indicate that Group 2 experienced more significant progress than Group 1. The results revealed that this improvement was significant for both groups ($p \leq 0.01$). In other words, both recast and MCF provided by extroverted teachers positively influenced learners' self-esteem. However, MCF delivered by extroverted teachers proved more effective than recast feedback provided by teachers with the same personality trait. To further compare the mean differences between the introvert and extrovert groups based on the type of feedback they received, with a specific focus on self-esteem, a paired samples t-test was conducted (see Table 8).

Table 8 indicated that the two groups had progressed in self-esteem. The mean difference for (introvert/recast) group was 2. The mean difference between the first and second ad-

Table 3. One-way ANOVA for the self-esteem.

	Variable	Sum of squares	Df	Mean square	F	Sig.
Selfesteem1	Between groups	27.150	3	9.050	.338	.798
	Within groups	2569.840	96	26.769		
	Total	2596.990	99			
Pretest writing	Between groups	15.160	3	5.053	1.241	.299
	Within groups	390.800	96	4.071		
	Total	405.960	99			

Table 4. Levene's test of equality of error variances.

Construct	F	df1	df2	Sig.
Self-esteem 2	.317	3	96	.813
Writing 2	2.460	3	96	.067

Table 5. Box's test of equality of covariance matrices.

box's M	9.641
F	1.031
df1	9
df2	105613.582
sig.	.412

a. Design: Intercept + teacher + corrective feedback + teacher * corrective feedback.

ministrations for the group (introvert/metalinguistic) group came to 4.92. The results implied that the progress within the Introvert/Metalinguistic was more significant than that of the Introvert/Recast group. Simply put, both recast and MCFs given by introvert teachers were beneficial in promoting learners' self-esteem. However, metalinguistic feedback provided by the introvert teacher was more effective than recast feedback provided by the teacher with the same personality type. Besides, both groups had progressed in their writing skill at the end of the study. The mean difference between the pretest and the posttest of writing for (extrovert/ recast) group was 1. The mean difference for the extrovert/metalinguistic group was 2.24. This shows that both recast and MCFs given by extrovert teachers were advantageous in improving learners' writing skills. However, metalinguistic feedback given by extrovert teachers was more influential than the recast feedback given by teachers with the same personality trait.

A paired sample T-test was run to test the learners' writing skills at the end of the study (See Table 9).

The paired t-test results indicated that the groups had advanced at the end of the study. The mean difference between the pretest and the posttest for the Introvert/Recast group was 1.08. The mean difference between the pretest and the posttest for Introvert/Metalinguistic was 1.76 points. The results implied that the progress within Introvert/Metalin-

guistic was more significant than introvert/recast. However, it was noticed that this improvement was statistically significant for both groups ($p \leq .01$). It meant that both recast and MCFs given by introvert teachers had been beneficial in fostering learners' writing skills. However, metalinguistic feedback provided by the introvert teacher was more effective than the recast feedback provided by the teacher with the same personality type. In addition, an independent samples t-test was run to check teachers' personality type on learners' self-esteem (See Table 10).

Based on Table 10, there was no significant difference between the mean scores of the two groups regarding self-esteem $t(48) = 0.15$, $p = 0.874$, two-tailed). The degree of the differences in the means (mean difference = 0.240) was minimal. Similar to the first administration of the questionnaire, the results showed that teachers' personality type did not affect learners' self-esteem differently $t(48) = 0.06$, $p = 0.948$, two-tailed). Although learners who instructed introverted teachers reported higher self-perceived self-esteem than those taught by extroverted teachers, the degree of the differences in the means was small ($MD = 0.080$).

The significance value for Levene's test was (0.04 , $p \leq 0.05$). Thus, it could be assumed that the two groups did not have equal variances in the second administration of the SES. During the second administration of the SES, the teachers' personality type appeared to affect learners' self-esteem

Table 6. Multivariate tests of the SES and the writing test.

	Effect	Value	F	Hypothesis df	Error df	Sig.	Partial eta squared
1	PT	.054	2.68	2.00	95.00	.073	.054
	WL	.946	2.68	2.00	95.00	.073	.054
	HT	.057	2.68	2.00	95.00	.073	.054
	RL	.057	2.68	2.00	95.00	.073	.054
2	PT	.082	4.24	2.00	95.00	.017	.082
	WL	.918	4.24	2.00	95.00	.017	.082
	HT	.089	4.24	2.00	95.00	.017	.082
	RL	.089	4.24	2.00	95.00	.017	.082
3	PT	.022	1.05	2.00	95.00	.351	.022
	WL	.978	1.05	2.00	95.00	.351	.022
	HT	.022	1.05	2.00	95.00	.351	.022
	RL	.022	1.05	2.00	95.00	.351	.022

1 = teacher's personality trait; 2 = types of corrective feedback; 3 = teacher's personality trait * corrective feedback.

PT = Pillai's Trace; WL = Wilks' Lambda; HT = Hotelling's Trace; RL = Roy's Largest Root.

Table 7. Paired sample t-tests for the self-esteem scores.

Group	Pair	Test	mean	SD	t	df	Sig.
Recast	1	SE1-2	-1.68	2.51	-3.34	24	.003
Metalinguistic	2	SE1-2	-3.44	1.87	-9.18	24	.000

Note: SE = self-esteem 1 – self-esteem 2.

differently ($t(48) = 2.07$, $p = 0.044$, two-tailed). Learners whom introvert teachers instructed reported higher self-perceived self-esteem than those taught by extrovert teachers, and the degree of the differences in the means was relatively large ($MD = 0.264$, $\eta p^2 = .001$).

Analysis of the second question

A theme analysis was carried out to explore teachers' perceptions of the type of feedback. Following Larkin et al. (2006) guidelines, the study applied a phenomenological bottom-up approach to analyze the data, focusing on the nature of the experience. Data were collected through interviews, and patterns of meaning were identified to examine teachers' views on the course process. Some teachers favored a teacher-centered error correction method and thus preferred explicit feedback. They felt that implicit WCF was not clear enough. Thus, their learners might not understand what they did wrong and how to correct it. One of them said:

A: *I immediately mention the errors and give my learners explicit feedback on their errors. I sometimes underline the errors and provide the correct forms in the margins of the learners' papers.*

However, some of them preferred implicit feedback and encouraged the students to self-correct their errors. One of them pointed out:

B: *I mainly use implicit feedback as I believe it is more student-centered and makes learners take part in their own learning. Thus, I try indirectly guiding my learners towards the correct forms without explicitly correcting them.*

EFL teachers' views on WCF were mixed, with some believing that it contributed positively to their foreign language learning while others were disappointed. Some teachers responded that WCF was a necessary tool for developing EFL learners' writing skills. One of them put it:

M: *I think WCF promotes my learners' writing skills as it provides them with specific feedback on their errors and helps them learn from them.*

It was also found that the teachers had different preferences for providing WCF to their EFL learners' errors or mistakes in their writing. However, almost all of them accepted that a combination of implicit and explicit feedback, depending on the type of error and the learners' individual needs, was the most effective way of providing WCF. They used both underlining and circling errors. One of them said:

G: *I mainly underline the grammatical errors and directly provide explicit corrections for them, but I circle vocabulary-related errors or errors in terms of coherence and ask some questions to prompt self-correction for my learners.*

EFL teachers reported various WCF strategies for dealing with learners' errors or mistakes in their foreign language writing. They highlighted that the strategies they employed aimed to provide supportive and constructive feedback for their learners. They also added that they preferred to use strategies tailored to their learners' needs. One of the teachers said:

F: *I frequently use the positive feedback sandwich approach. I start with positive comments and then criticize the errors, and finally give my positive comments.*

Almost all EFL teachers agreed that peer correction and self-correction were valuable strategies for improving students' writing skills. They believed that peer correction and self-correction could help students become learners that are more independent. One teacher said:

P: *When students are required to correct their own or their peers' written texts, they can easily remember the proper form and thus avoid making the same error in their future writing.*

Regarding MCF, some teachers provided learners with information about the underlying rules of the written language and perceived that MCF was an effective way of improving EFL learners' writing skills. Introverted teachers were interested in providing MCF. One of the introverted teachers said:

Table 8. Paired sample t-tests for the self-esteem scores of groups.

Type	Group	Pair	Mean	SD	t	df	Sig.
SE1-2	Introvert/Recast	1	-2.00	2.02	-4.94	24	.00
SE 1-2	Introvert/Metalinguistic	2	-4.92	3.41	-7.20	24	.00
PTW1-2	Extrovert/Recast	1	-1.00	1.04	-4.80	24	.000
PTW1-2	Extrovert/Metalinguistic	2	-2.24	3.04	-3.67	24	.001

*SE1-2 (self-esteem 1 – self-esteem)2. PTW1-2 (Pretest writing – posttest writing).

Table 9. Paired sample t-tests for the writing test scores for introvert group.

Group	Pair	Test	Mean	SD	t	df	Sig.
Recast	1	Pretest – posttest writing	-1.08	1.68	-3.21	24	.004
Metalinguistic	2	Pretest – posttest writing	-1.76	.87	-10.00	24	.000

J: *I have a good understanding of [understood]the underlying rules of the written language, so I try to give my learners accurate and detailed feedback when they make mistakes in their writing.*

Figure 4 summarizes the main themes of the interviews.

Discussion

This study offers meaningful insights into the interplay between EFL teachers’ personality traits and students’ self-esteem and writing performance, specifically in the context of recast and metalinguistic written corrective feedback. Contrary to expectations, the study found that teachers’ personality traits-extroverted or introverted-did not significantly affect students’ writing skills or self-esteem. The result suggests that while teacher personality may influence classroom dynamics and interpersonal interactions, it is not the primary factor determining students’ success in language acquisition. Instead, the study revealed that the type of corrective feedback provided-recast or metalinguistic-notably impacted students’ self-esteem and writing abilities. This finding aligns with previous research (Gan et al., 2020; Ghaffar and Khairallah, 2021; Liu and Zhou, 2018) indicating that the nature and quality of feedback play a critical role in enhancing language learning achievement. The students responded positively to feedback that was tailored to their needs, suggesting that corrective feedback, whether explicit or implicit, can foster improvement in writing skills and bolster self-confidence. The significance of feedback type supports the view that feedback interventions are more influential than teacher personality in shaping EFL learners’ academic performance. Besides, the interviews provided valuable qualitative data that highlighted students’ preferences for different types of feedback, which varied according to their individual needs and language proficiency levels. Some students preferred the more explicit nature of metalinguistic feedback, which offers a deeper understanding of language rules, while others responded better to the approach of recasts. This variation underscores the importance of personalized feedback strategies. Teachers who can

identify and adapt their feedback methods to cater to students’ individual learning styles and proficiency levels are likely to be more effective in supporting learners’ growth and fostering a positive learning environment. This study concerns the ongoing conversation in EFL education about the interplay between teacher characteristics, feedback, and student outcomes. While teacher personality traits did not directly impact the student’s performance in this study, it is important to highlight the broader implications of how teacher characteristics influence classroom interactions and the learning environment. Teachers’ awareness of students’ feedback preferences and ability to provide explicit and implicit feedback as needed may be just as critical, if not more so, than their personality type in promoting language development. This study emphasizes the primacy of corrective feedback in influencing EFL learners’ writing skills and self-esteem, suggesting the dynamic nature of feedback with a focus on the learners.

The findings support some recent studies (Kim and Cho, 2020; Bloem et al., 2024; Paz-Baruch and Spektor-Levy, 2024) highlighting the importance of different teacher characteristics—such as gender, age, socioeconomic status, cultural background, and education level-as potential factors influencing learner achievement. The findings are consistent with Bardach et al. (2022) and Moyano et al. (2023), which suggest that teachers’ performance is strongly influenced by their personal characteristics. They argue that a teacher’s actions, attitudes, and beliefs play a critical role in shaping student outcomes, as these elements impact how they interact with students and approach their teaching practices. In this regard, a teacher’s personality can affect the learning environment, potentially enhancing or hindering student progress depending on the alignment between teaching methods and student needs. However, the study also reflects the perspective of Noreen (2019), who argued that there is no significant correlation between teachers’ personalities and students’ academic success. Their research suggests that while teachers’ personal traits may affect classroom dynamics and instructional methods, these traits do not nec-

Table 10. Independent samples t-test for the self-esteem scores of groups 1 and 3.

Variable	Equal variances	Levene’s test for equality of variances		t	df	Sig.	MD
		F	Sig.				
Self-esteem 1	Assumed	2.27	.138	.15	48	.874	.240
	Not assumed			.15	45.7	.874	.240
Self-esteem 2	Assumed	.28	.595	-.06	48	.948	-.080
	Not assumed			-.06	47.1	.948	-.080

MD = Mean Difference.

Table 11. Independent samples t-test for the self-esteem scores of groups 2 and 4.

Variable	Equal variances	F	Sig.	t	df	Sig.	MD
Self-esteem 1	Assumed	4.45	.04	-.82	48	.416	-1.16
	Not assumed			-.82	46.4	.416	-1.16
Self-esteem 2	Assumed	.50	.48	-2.07	48	.044	-2.64
	Not assumed			-2.07	47.8	.044	-2.64

essarily translate into measurable academic achievement for students. This viewpoint contrasts this study, which highlights the nuanced interplay between teacher personality, feedback strategies, and student outcomes. These differing perspectives underscore the complexity of the association between teacher personality and student success. While teachers’ characteristics undoubtedly influence their teaching styles and interactions with students, other factors—such as the student’s own traits, prior knowledge, and external influences—also play a critical role in academic success. The current study adds to this ongoing debate, suggesting that while teacher personality can have some impact, it may not always be the primary or most significant factor influencing student performance.

From the theoretical perspective, the findings align with Eysenck et al. (1985), which posits that various learning styles, teaching methods, and educational processes are deeply intertwined with teachers’ personalities. This connection underscores the idea that a teacher’s personality can be crucial in shaping their teaching strategies’ effectiveness and students’ learning experiences. Furthermore, the results support Deng et al. (2017) assertion that teachers’ preferred teaching activities often reflect their personality traits. Teachers with different personality types will likely gravitate toward specific instructional approaches that align with their inherent preferences and behavioral tendencies.

For instance, introverted teachers may favor more structured and reflective teaching methods, while extroverted teachers might be drawn to more interactive and dynamic activities. This consistency between personality and teaching style not only affects how teachers involve with their students but also directly influences the academic environment, as students may respond more positively to teaching approaches that resonate with the teacher’s personality. Therefore, such findings stress the influence of personality in the educational process and suggest that both students and teachers could benefit from a deeper understanding of how personality traits shape teaching and learning interactions. The findings support previous studies (Barjestesh et al., 2025; Ramadan Elbaoui Shaddad and Jember, 2024; Sankalaite et al., 2023) indicating the dynamic interactions between teacher and student in shaping language learning outcomes. From the theoretical perspectives, the findings support some assumptions (Bardach et al., 2022; Ferreira et al., 2024; Moyano et al., 2023) on teacher and learner interaction such as collaborative learning, social-emotional development, learners’ needs and preferences.

The findings showed that the students taught by extroverted teachers had higher language achievement than those with introverted teachers, the findings showed no significant difference between the writing and self-esteem scores of the groups instructed by teachers with different personality

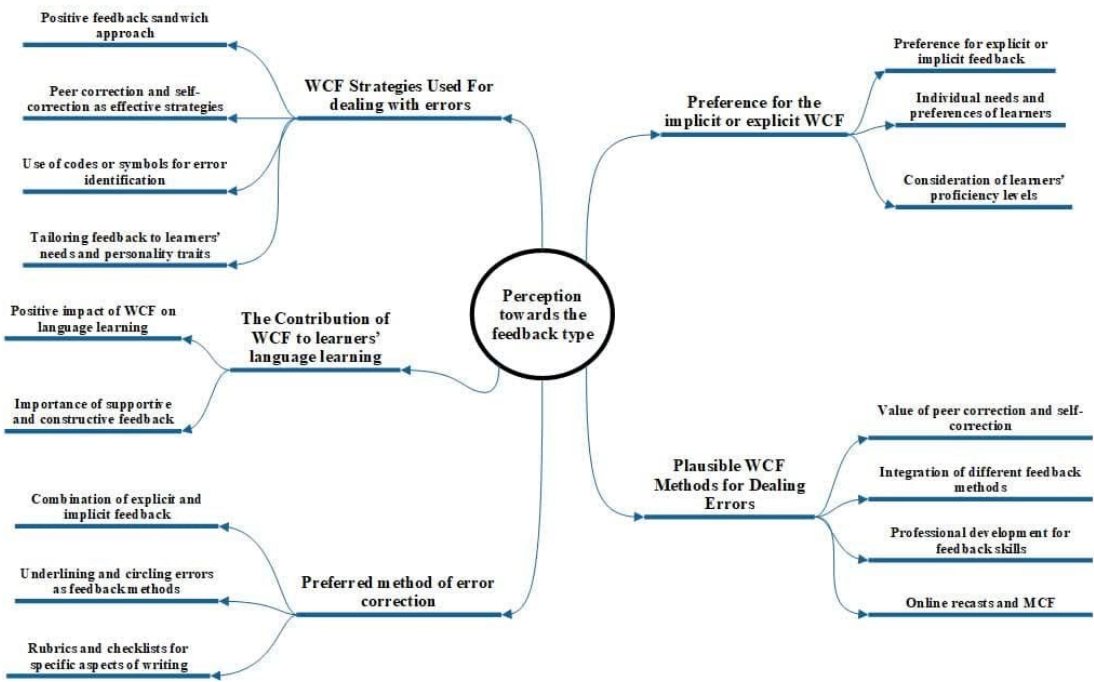


Figure 4. The main themes of the interviews.

traits. Regarding the interview results, the thematic content analysis showed that the learners whom introverted teachers taught also reported feeling more motivated and engaged, leading to increased self-esteem and higher performance in their writing. The interview results also indicated that the introverted teachers were more reflective and analytical in correcting learners' writing errors, while the extroverted teachers were more enthusiastic. Moreover, the extroverted teachers felt most comfortable correcting the error while highly interacting with the learners. Regarding implementing corrective feedback, it was clear that most teacher participants believed correcting errors was essential for enhancing learners' writing skills. However, mixed results were reached when asked whether explicit or implicit feedback was more effective in improving EFL learners' writing performance. Most of the teachers supported using the combination of implicit and explicit feedback. They sometimes slightly modify the learners' writing, such as adding or deleting words or phrases or rephrasing some sentences. On the other hand, they also used implicit feedback to help learners analyze and deduce the errors themselves. Integrating implicit and explicit feedback into the writing classes can promote a deeper understanding of the linguistic structures used, leading to more long-lasting learning. Moreover, this combination of corrective feedback helped learners consciously notice the input. Similar to the findings of Gan et al. (2020), some teachers preferred to use implicit feedback, as they believed direct criticism might lower students' self-esteem or motivation to learn. This aligns with the findings of Liu and Zhou (2018), who reported that implicit online feedback can be more suitable and may lead to less confusion or misunderstanding. On the other hand, some teachers preferred giving explicit feedback as they thought they could better inform learners of their errors directly and provide clear rules and explanations on how to correct them. The explicit approach's transparency helps teachers provide learners with immediate feedback, which can boost their confidence in writing and result in better achievement. This finding is in accordance with findings reported by Liu and Zhou (2018) that immediate explicit corrective feedback was more facilitative of L2 development. Ghaffar and Khairallah (2021) also reached a similar conclusion and found that explicit feedback (i.e., face-to-face) might better target specific grammar and syntax errors, making it easier for learners to identify and correct their mistakes. Both implicit and explicit feedback can improve EFL learners' writing performance. However, EFL learners generally prefer explicit feedback, while EFL teachers prefer a combination of implicit and explicit feedback. It is essential for EFL teachers to consider learners' preferences while providing feedback, as this can affect their motivation and willingness to learn. Given that EFL learners' needs and learning styles vary, a more balanced approach that combines implicit and explicit feedback may be the most effective way to enhance EFL learners' writing skills.

In terms of self-esteem, this study showed that both introverted and extroverted teachers effectively promoted learners' self-esteem but the difference was not statistically significant. The specific strategies used by each type of teacher

differed. For example, the introverted teachers said they utilized structured error corrections and provided learners with individual feedback to help them build confidence. In contrast, the extroverted teachers encouraged group work and peer feedback to promote community and support in the writing process. The introverted teachers preferred providing a safe and supportive learning environment that assisted their language learners in feeling more confident in their abilities to correct errors. In contrast, the extroverted teachers answered that they planned strategies to inspire students to take risks and express themselves creatively while correcting their errors. The responses showed that the teachers' personality traits partly affected how the learners viewed themselves in a negative or positive emotional state in the educational context. The interview with the learners showed they had different preferences for receiving error correction from the teachers. Some students said they felt more comfortable in a calm and focused learning environment where the teachers explicitly corrected their errors, while others preferred the implicit corrective feedback. While some studies have found a significant effect of a teacher's personality type on EFL learners' beliefs about their values, abilities, and writing performance, others have not. The role of EFL teachers' personality type in developing EFL learners' self-esteem and writing skills is complicated in language teaching and learning. The findings support Cheng (2021), who argued that extroverted teachers, particularly those who employ active and dynamic teaching strategies, tend to foster better academic performance among students. With their engaging and energetic teaching styles, extroverted teachers may create a more stimulating learning environment that encourages student participation, motivation, and overall academic success. Their preference for interactive activities, group work, and open discussions could promote student engagement. However, the results contradict Noreen (2019), who reported no significant relationship between teachers' personality traits and student outcomes. Their research suggests that factors other than personality, such as instructional methods, classroom environment, or student characteristics, may significantly impact academic success. While some studies, like Cheng et al., emphasize the influence of personality traits like extroversion on learning outcomes, others, such as Noreen et al., suggest that personality alone may not be a decisive factor. This discrepancy underscores the multifaceted nature of teaching and learning, suggesting that personality traits interact with various other variables—such as teaching style, student motivation, and classroom dynamics—to shape student achievement. Therefore, it is essential to underscore personality traits within the broader context of teaching practices and student needs, recognizing that other contextual factors may significantly influence educational outcomes.

Conclusion

This study provided the interplay between teachers' personality types and EFL learners' self-esteem and writing skills based on giving online recasts and MCFs. The findings suggested that a teacher's personality type while being an influential factor, might not significantly affect EFL

learners' self-esteem and writing performance. Specifically, EFL learners who attended classes taught by the introverted teachers who provided MCF had better writing scores and self-esteem than those taught by extroverted teachers who gave MCF or introverted teachers who gave recasts. The findings highlight the significance of considering multiple factors that may influence language learning outcomes and the need for EFL teachers to adopt effective teaching strategies regardless of their personality type. It can be concluded that the complex interplay between teachers' personality, teaching strategies, and language learning outcomes requires that every aspect of this complicated process should be examined carefully to inform more effective pedagogical practices. Additionally, EFL teachers should focus on creating a positive and supportive classroom environment regardless of their personality type. The choice of corrective feedback methods EFL teachers use for their learners' writing is likely to be influenced by various factors, including but not limited to teacher personality type. Ultimately, the most effective approach will depend on the specific needs and goals of the individual student and the writing task. This study highlights the importance of considering both the type of corrective feedback provided and the personality traits of EFL teachers when designing language instruction. Considering these factors, we can better support EFL learners' language-learning journey. Thus, the role of EFL teachers' personality type in developing EFL learners' self-esteem is multifaceted. Foreign language teachers choose a teaching style of pedagogical activities, including techniques for error correction, that is consistent with their personality. Finally, introverted and extroverted teachers can effectively build learners' self-esteem and improve writing performance. The personality traits of extroversion and introversion are two important factors that can influence the learning process of EFL learners. By adopting a comprehensive perspective on understanding the role of teacher personality in language learning, we can develop effective strategies for supporting EFL learners' self-esteem. While the study provides important contributions to the literature on EFL teaching and feedback, it also raises several areas for further exploration. Firstly, the lack of significant effects from teacher personality traits-extroversion and introversion-suggests that other teacher characteristics, such as emotional intelligence, pedagogical approach, or even the teaching experience, may have more pronounced effects on student outcomes. Further research could investigate how these factors interact with feedback strategies to influence language acquisition and self-esteem in diverse EFL contexts. Secondly, the study focused on two specific types of feedback—recast and metalinguistic written corrective feedback—without considering a broader spectrum of feedback methods, such as direct correction, peer feedback, or explicit error correction strategies. A comparative study involving multiple feedback types could lead to a deeper understanding of how different forms of feedback impact learners' writing skills and emotional development. Additionally, using self-reports to measure personality traits and self-esteem may be prone

to biases, such as social desirability or self-perception distortion. Alternative assessment methods, such as direct observation, peer evaluations, or psychometric testing, could provide more reliable and valid data on the influence of teacher traits and feedback types. Finally, the study's sample consisted only of senior secondary students, which restricts the applicability of the findings. The impact of teacher personality traits and feedback strategies might differ across age groups, language proficiency levels, and cultural contexts. Future studies could explore the role of teacher traits and feedback across a more diverse range of learners, including younger students, adult learners, and students from different cultural backgrounds, to offer a nuanced understanding of how such contribute to EFL learning outcomes. In conclusion, while this research makes valuable contributions to the field of EFL pedagogy, addressing the aforementioned gaps could offer deeper insights into the complex interplay between teacher characteristics, feedback types, and student outcomes. Future studies could expand by incorporating different feedback methods, alternative assessment tools, and diverse learner populations to enrich our understanding of effective EFL teaching strategies.

Authors contributions

All authors have contributed equally to prepare the paper.

Availability of data and materials

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

Conflict of interests

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

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