

# Tailoring written feedback to fit: The role of cognitive learning styles in improving EFL writing with feedback

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## Abstract

Writing is one of the essential skills that foreign language learners should master. Written feedback is a practical way for teachers in China to provide feedback when teaching English writing. As a dimension of the learner factor, students' cognitive learning styles may influence their performance in developing writing skills and their reaction to teachers' written feedback. This research investigates the effects of teachers' written feedback on English learners with different cognitive learning styles during an English writing course at a university in Beijing. Twenty-six students were recruited and divided into two groups according to their cognitive learning styles. Their essays were observed over a semester, and 13 of them received a follow-up interview. Analysis was based on observing and comparing their reactions to written feedback from the two groups. Students in the field-independent group tended to respond to the feedback with more personal reflection and acted on the feedback to solve more problems in their writing. This finding suggests that teachers can provide more appropriate feedback tailored to students' cognitive learning styles to help them improve their English writing.

**Keywords:** Cognitive learning style, field dependent/independent style, teachers' written feedback, English writing, reaction to feedback

## 1. Introduction

Learners possess different learning styles; therefore, specific teaching methods that some learners prefer may not be effective for others (Franky & Budiman, 2021). According to the popular way of classifying learning styles, field-dependent learners tend to see things holistically, and field-independent learners are better at separating details from the background (Witkin et al., 1977). Multiple studies suggest that field-dependent and field-independent learners perform differently in foreign language learning and have different needs (Carter, 1988; Mahvelati, 2020; W. Wang & L. Wang, 2023). These studies have investigated learners' performances in different English learning tasks with various teaching methods and found differences between the effects of these methods on learners with the two learning styles. However, previous research has not meaningfully explored the influence of different learning styles on learners' actual reactions to written feedback.

Writing is an essential ability that foreign language learners should grasp. In English writing classes in China, written feedback, which refers to teachers' written responses to learners' essays (Zamel, 1985), is the most practical way to provide feedback. When considering learners' improvement in English writing, the connection between certain types of feedback, learners' learning styles, engagement, anxiety, and writing performance has not been fully examined (Ren et al., 2026). As learners with various learning styles have different needs when developing English writing skills, they may react differently to teachers' instructions, for example, written feedback and progress differently. Written feedback can be individualized so it can be tailored to better meet students' different needs, for example, their learning styles. Therefore, to fulfil the connection between English writing, feedback and learners' learning style, the current research investigates the similarities and differences between the reactions of field-dependent and field-independent learners to teachers' written feedback and their writing improvements. Based on the results, this research presents the common reactions of field-dependent and field-independent learners to teachers' written feedback and their improvements related to the feedback. Then the research indicates the influence of teachers' written feedback on learners with different cognitive learning styles and suggests appropriate ways for teachers to tailor their written feedback for students, specifically for English writing tasks.

## 2. Literature Review

### 2.1 Influence of Cognitive Learning Styles on English Learning

Most researchers agreed that a learning style was about "how the mind actually processed information or was affected by each individual's perception" (Dunn, 1984, p.11). As a stable individual factor, cognitive learning styles determine how learners perceive and process information, thus resulting in different effectiveness in language learning. Various factors related to cognitive learning styles, such as cognitive style category width and learning style types, have been confirmed to influence foreign language learning in different aspects (Munkova et al., 2024; Olagbaju, 2020; Wu, 2016). Learners' language competence, learning behaviour and learning achievements vary according to learners' cognitive learning styles.

Among the different ways of classifying learning styles, the earliest and most popular ones are field-dependence and field-independence classified from learners' cognitive

methods (Witkin et al., 1977), representing the tendency to see things holistically or separate details from the background. This classification is stable and dipolar and remains one of the most common and widely researched methods of classifying learning styles from the cognitive perspective. According to Witkin et al. (1977), field-dependent learners are better at the overall perception approach and can favour reading and writing activities. Meanwhile, field-independent learners focus on their inner motivation, excel in oral practice, and understand language input more quickly.

When studying learning styles, many researchers assume that field-dependent or field-independent learners perform differently in language learning. For example, Carter (1988) examined second-language learners of Spanish. He found that field independence contributed more toward formal linguistic achievement and functional language proficiency tasks, proposing the assumption that field-independent second language learners perform better in language form and classroom learning. Mahvelati (2020) studied Iranian students' performance in implicit learning tasks and found that field-independent learners were more active in processing information and better at recalling information from memory. Some researchers have also studied the effects of particular instructions on learners with different learning styles. W. Wang and L. Wang (2023) mentioned the interaction between cognitive learning styles and implicit or explicit instructions on learners' acquisition of the simple past. They also found that field-independent learners performed better with both types of instructions. Gui and Ismail (2024) indicated field dependence influenced learners' time planning and thus impacting their language learning outcomes. Despite the various focuses on language performance, these studies all emphasize that learners with different cognitive learning styles vary in their learning habits and performances.

In conclusion, learners with field-dependent and field-independent cognitive learning styles develop different ways of processing information and reacting to external information. They also perform differently in language learning. Therefore, the effects of teachers' written feedback can vary between different learners, and their reactions to it can be affected by their cognitive learning styles. Besides, the learning outcomes of learners with various learning styles are also affected by teaching methods and other factors in classrooms. Therefore, more suitable teaching methods can be explored.

## **2.2 Effect of Written Feedback on English Writing**

Feedback is indispensable for teachers to help English learners improve their language accuracy and efficiency. Feedback refers to "input from a reader to a writer with the effect of providing information to the writer for revision" (Keh, 1990, p.294). Ur (1996) defined feedback in the teaching environment as returning information on a specific learning task to improve learning. Feedback provides useful information about students' learning and is found to be one of the most powerful sources and influential factors affecting student achievement (Lee, 2017). In writing classes in China, feedback is often given in written form on learners' writing, providing information written for learners to guide them in revising and improving their writing. In addition, the teacher is the most important source of feedback most of the time. In universities, teacher written feedback is also the most common type of feedback in English writing classes, helping students improve their writing.

Research has indicated the effect of written feedback on learners' future writing development. Li (2013) and Yang (2013) both examined the impact of written feedback on university students' English writing and demonstrated that teachers' written feedback could help learners improve their writing. Zhang and Cheng (2021) revealed that such written corrective feedback helped significantly improve EAP students' writing accuracy and fluency, thus proving the positive effect of written feedback. Different types of written feedback, including focused, mid-focused and unfocused, have all been found to positively influence L2 learners' writing (Xiao & Liu, 2021; Zhang, 2021). With written feedback, learners improved their accuracy and performed better in foreign language learning. Lee and Cha (2022) examined the influence of digital written feedback on college students' learning experience and attitude and also proved a positive effect. These studies all emphasise the positive effect of written feedback on students' progress in English writing.

Learners deal with feedback differently after receiving it. According to Yu and Yang (2021), students' responses toward written feedback can be divided into three dimensions, which are behavioral, affective, and cognitive responses. Behavioral responses include learners' revision operations and strategies and affective responses refer to learners' attitudes and emotional changes. The cognitive responses consider learners' perceptions of the feedback, for example their processing of the feedback. For behavioral responses, learners would focus on feedback information selectively, accept or ignore feedback, or seek external help with the feedback (Yu et al., 2021). The behaviour results in different effectiveness of teacher written feedback. In addition to confirming the effectiveness of various types of feedback, Shintani et al. (2014) found that opportunities for revision enhanced the effect of feedback. Ekanayaka and Ellis (2020) investigated the add-on effect of asking students to revise after receiving written corrective feedback and further confirmed the add-on effect of revision in improving writing accuracy. These indicate that written feedback has a more powerful effect with revision.

Meanwhile, in the affective dimension, learners have their preferences for written feedback on their assignments. Amrhein and Nassaji (2010) found that learners preferred larger quantities of error correction for all types of errors in their writing. Chinese L2 learners also held a favourable attitude toward error corrections but preferred direct revision and comments on content and grammar (Chen et al., 2016). Written feedback also has a different emotional impact on learners. Students can experience positive, negative or neutral emotions (Mahfoodh, 2017; Han & Xu, 2020) and learners' feelings toward written feedback influenced their likelihood of acting upon it. Written feedback has pedagogic value when learners take it up and follow it through (Andon et al., 2017). When learners felt pessimistic about the feedback, it was less effective. Therefore, learners' attitudes toward feedback deserve further investigation.

Concerning English writing performances, multiple learner factors including learners' working memory, English language proficiency and self-efficacy all play a role as well as affecting each other (Teng & Ma, 2026). When improving English writing, these learner factors like background experiences, emotions, self-efficacy, current capacity for and disposition toward learning all influence their uptake of feedback (Leung, 2020; Tsao, 2021; Kong & Teng, 2023). These findings demonstrate that learner factors influence how learners deal with feedback and also the effects of the feedback. Thus, learner factors should

be considered when studying the effects of written feedback on writing.

### **2.3 Relation between Learning Style and Effect of Feedback**

Learners' individual factors have been shown to influence learners' learning engagement, learning outcomes and the effect of teachers' instructions and feedback, for example, the influence of learners' language analytical ability, learner beliefs and experience (Han & Hyland, 2015; Shintani & Ellis, 2015). Among learner factors, cognitive learning styles are significant. Kafipour and Khoshnood (2023) investigated the effect of feedback through dynamic assessment on Iranian learners' speaking skills by considering their cognitive styles. They pointed out that the field-dependent group outperformed the other group with the feedback, thus confirming the vital role of learners' cognitive styles in the effectiveness of feedback in foreign language learning. These all confirm the relationship between learner factors and learning, especially the influence of learners' learning styles.

Concerning feedback in English teaching and learning, Guo and Yang (2018) investigated the effectiveness of two types of feedback, recasts and prompts, on the acquisition of the third-person singular form and the mediating role of cognitive style and found that field dependence or field independence may mediate the effectiveness of recasts in the acquisition of the third-person singular form. Yeldham and Gao (2021) explored the relation between learning outcomes and the matching of learners' cognitive styles and teachers' listening instruction methods. They found evident support for matching, which indicates the relationship between learners' cognitive styles and teachers' feedback. Farangi et al. (2025) examined the influence of cognitive learning styles on learners' preferences of the amount and types of written corrective feedback in English writing. Their results indicated field independent learners preferred indirect feedback while field dependent learners favored explicit corrections so that the same type of feedback could benefit them differently. The results all demonstrated a relationship between certain learning styles and the effects of feedback. The effectiveness of various types of feedback varies according to learners' cognitive learning styles in foreign language listening and speaking.

In summary, most previous research on written feedback focuses on the broader teacher factors, types of written feedback or students' revisions, while the influence of learner factors such as students' affective factors, understanding of feedback, and their use of feedback are not fully considered (Hyland, 2010). The gap between learning styles and effective feedback and instructions in English learning needs to be bridged (Farangi & Nejadghanbar, 2024). Still, limited research has been conducted on the link between learner factors and feedback. While Farangi et al. (2025) confirmed the relation between cognitive learning styles and learners' preferences toward feedback, the relation still needs exploration in different teaching practices and cultural contexts. Learners' differences and inner factors, for example, learning styles, deserve further exploration to make feedback more effective.

To address these gaps and explore the relationship between these two concepts in English writing, specific research questions are as follows:

- (1) How do field-dependent and field-independent learners in China react to teachers' written feedback on their English writing?
- (2) What are the similarities or differences between the reactions of field-dependent

and field-independent learners to teachers' written feedback on their English writing?

### 3. Methods

#### 3.1 Participants

The participants in this research were 26 first-year English majors from the same university in Beijing. They were all native Chinese speakers who took English as a foreign language and they took an English reading and writing course. Their English levels were intermediate, and they had not taken any English courses previously.

All the participants volunteered to take part and signed consent forms. During the study, they were taught by the same teacher in the English reading and writing course, and they did not learn English writing through any other programmes. They took classes with the same content, received the same opportunities for learning and practising writing and completed the same writing tasks in the same period of time.

#### 3.2 Instrumentation

##### 3.2.1 Group Embedded Figures Test

Witkin's Group Embedded Figures Test (GEFT) was utilized to examine the participants' cognitive learning styles. GEFT was first designed by Witkin et al. in 1971 and its reliability was reported to be 0.82. The GEFT test is still widely used to explore the relationship between cognitive learning style and foreign language learning (Guo & Yang, 2018; Zhang et al., 2020; Heidari, 2022). It was a convenient and practical method of assessing cognitive learning styles. The Chinese-language version of this test (Chen et al., 1989) was readily available and it was adopted to make the participants clear about the test and ensure the accuracy of the result.

The test comprised three parts and 33 figures: eight simple figures, seven complex figures and 18 more complex figures. Each complex figure includes one of the eight simple figures. In the test, the participants were shown the simple figures first. Then, they were given the first set of complex figures to practice finding the simple figure within them in two minutes and then the second set of complex figures to identify simple figures in nine minutes. The participants obtained points for one complex figure when they correctly identified the simple figure in it. Participants' scores were determined according to the criteria listed in Table 1.

**Table 1.**

Criteria for GEFT

Points for each complex figure	Number of the figure
1	1 2 3 4 5 6 7 8 17
6	9 11 12 15 16 19 20 22 23
7	10 13 14 18 21 24 25

In this test, field-dependent participants tended to have more difficulty finding the simple figure. Thus, participants who obtained higher scores tended to be more field-independent, while participants with lower scores tended to be more field-dependent.

##### 3.2.2 Interview

To understand the participants' attitudes and feelings about the written feedback and to find out their reactions that cannot be seen in the writing, an outline for the following semi-

structured interview was designed based on the participants' situation of dealing with the teacher's written feedback presented in their writing. The outline mainly consisted of six series of questions, discussing how the participants dealt with the teacher's written feedback, their attitudes toward the feedback and their opinions on their improvements. The first and second series of questions focused on participants' attitudes toward the teacher's written feedback and their preferences. The third series of questions investigated the participants' habits of organising the teacher's written feedback. The fourth series of questions discussed the participants' ways of dealing with confusion. Then, the last two series of questions were about participants' possible improvements in writing with the teacher's written feedback and their perceptions of the effect of the feedback.

The interview outline served as the basic structure of the interview, prompting significant elements in the interview. The interview pattern is not rigid. The order of the questions was adapted and other relevant questions to supplement useful information were added according to the situations in each interview and the results of each interviewee's questionnaire. The participants were also allowed to express their opinions and ask relevant questions according to their willingness. The interviews were conducted in Chinese to avoid difficulties for participants in understanding questions and expressing their real feelings.

### 3.3 Procedure

At the beginning, all the participants completed the GEFT test and their scores were assigned according to the criteria. Based on their scores, the participants were classified into two groups due to the sample size. The participants whose scores were higher than the average score comprised the field-independent group, and the others were placed into the field-dependent group. Table 2 presents the results for all the participants and the two groups.

The participants attended English reading and writing classes once a week. They received four writing tasks during the semester and were given one week to complete each essay. For each piece, the teacher or teaching assistant responsible for the class provided feedback directly written on the learners' essays.

**Table 2.**

Descriptive Statistics of GEFT

GEFT	N	Range	Minimum	Maximum	Mean
All	26	92	13	105	56.77
Field-dependent group	13	40	13	53	39.46
Field-independent group	13	48	57	105	74.08

After receiving the feedback, participants could react to the feedback as they thought appropriate without a time limit. The participants who only solved the problem according to the feedback were judged to have accepted the feedback. The participants who made further revisions in addition to the corrections identified by the teacher made more revisions. The participants who did not revise their submissions ignored the feedback. Their responses to the feedback did not change over the four essays. All essays written by the participants and their revised versions, if applicable, were collected.

At the end of the semester, seven participants from the field-dependent group and six

from the field-independent group were interviewed. The seven field-dependent participants were numbered from Student D1 to D7, and the six field-independent participants were numbered from Student IND1 to IND6. The participants answered questions about their reactions to the teacher's written feedback and their opinions on their improvements based on the feedback. Based on the interview outline, follow-up questions were added to check the participants' meaning and obtain more information when needed. All interviews were recorded with the participants' consent.

### **3.4 Data analysis**

The effectiveness of feedback can often be reflected by learners' reactions to it, considering their behavioural, affective, and cognitive reaction according to Yu and Yang's model (2021). Participants' reactions to teachers' written feedback were classified after observing and analysing the differences between the original and the revised versions of the participants' submissions. Whether the participants avoided making the same mistakes that the teacher's written feedback had pointed out was also compared across the four essays. When the errors pointed out did not occur, or the same problem did not appear in the teacher's written feedback, the problem was judged to have been solved.

The interview records were first transcribed using speech-to-text technology in the Tencent Meeting application. The transcription was revised according to the original records and then reorganised according to the interview questions. Answers to the same question were analysed and key sentences or segmented phrases were picked out and grouped according to their meanings. The answers of the two groups were then compared. Through the interview analysis, learners' common types of affective and cognitive reactions were summarised and compared. The effect of written feedback was analysed from the perspectives of participants' reactions to it considering their behavioural, affective, and cognitive reactions and also their improvements in later tasks. The features of each group were shown by the combination of the survey of participants' writing and interview results and were then compared.

## **4. Results**

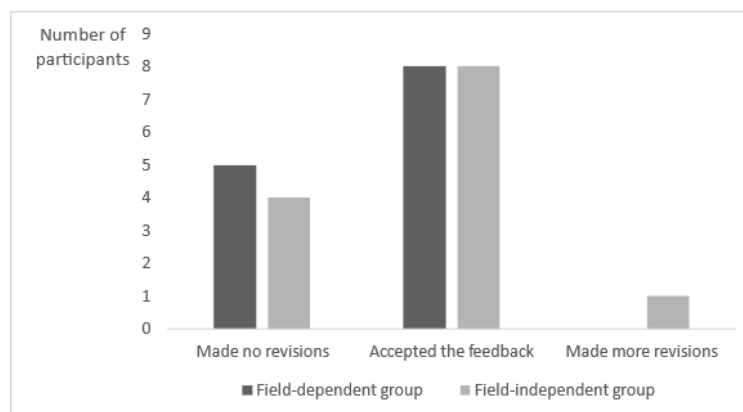
### **4.1 Behavioural Reaction to Teacher's Written Feedback**

Participants' behavioural reactions to written feedback in this study were reflected in their behaviour of revision after receiving the feedback.

According to the interviews, all the participants read the teacher's written feedback carefully, and more than half of them improved their writing accordingly. The comparison between the participants' original and revised essays also showed that most of the participants from both groups had some reaction to the teacher's written feedback, indicating the feedback's influence.

Among all the participants, 16 accepted the teacher's written feedback by correcting grammar and syntax mistakes, among whom half were from the field-dependent group and half from the field-independent group. Nine participants did not revise their essays at all, among whom five were from the field-dependent group and four from the field-independent group. Only one participant rewrote her essays based on the teacher's written feedback, and she belonged to the field-independent group. Figure 1 shows the

participants' reactions.



**Figure 1.** Participants' Reaction to Feedback

This implies that students with different cognitive styles reacted similarly to teachers' written feedback in behaviour. They all held a receptive attitude towards the feedback. Most learners accepted the feedback, a few gave up revising and a very small number made more revisions.

#### 4.2 Cognitive Reaction to Teacher's Written Feedback

Participants' cognitive reactions to written feedback mainly included the subsequent processing of written feedback in this research, which refers to learners' memorising, clarifying and questioning of the teacher's feedback.

When talking about the processing of the teacher's written feedback, almost all participants from the field-dependent group said they would not collect or compare the feedback from different essays. They claimed that they would remember the problems pointed out by the teacher when beginning a new essay. For example, Student D6 stated that she had taught herself to remember the feedback and avoid making the same mistakes. This suggests that field-dependent learners tried to memorise the key information in the feedback but they seldom spent more cognitive effort dealing with the feedback after making basic revisions. At the same time, most participants from the field-independent group had the habit of collecting and organising teachers' written feedback. Some of them explained their practices:

*I had a notebook. I categorised the expressions in the feedback, such as phrases and vocabulary and noted them down. (Student IND3)*

*I collected the correct expressions and read them again. Next time, I'll write my new essay according to these expressions. (Student IND4)*

This data shows that students with higher field independence tended to maintain the habit of collecting and arranging their teachers' written feedback. Although most of them did not make more revisions, they would find ways to record the key items, review the feedback and make relevant improvements in their writing later.

When feeling confused about the feedback, field-dependent learners would ask the

teacher for help directly, as Student D3 said:

*Sometimes I felt that I had written a specific part perfectly, but the teacher marked it. Then, I asked the teacher for the reason. (Student D3)*

However, three participants from the field-dependent group said they rarely needed clarification about the feedback, which suggests that learners with higher field dependence were less likely to feel confused about the teacher's written feedback or raise questions. The most common way for them to solve issues was to ask for help directly while learners with higher field independence would also ask the teacher for help. However, two participants from the field-independent group also expressed that they were unsatisfied with the teacher's feedback, but they failed to find solutions:

*Most of the teacher's written feedback corrected my grammar mistakes. It's OK, but it didn't solve my problem at the level of thinking. (Student IND5)*  
*I didn't know how to solve the confusion. Sometimes, the feedback was given by the teaching assistant, but she didn't come to our class. Once, I asked the teacher about a comment, but she only translated it for me. (Student IND6)*

Among the other participants who felt unsatisfied with the feedback, only Student IND4 said she would look up information online or read others' articles if the teacher's explanation did not suffice. This implies that most students from the field-independent group were not content with just the teacher's written feedback or explanations. They spent more cognitive effort processing and questioning feedback. In addition, they tended to seek more help and find more ways to solve problems.

The results indicate that field-independent learners found more ways to solve their problems with the feedback while field-dependent learners tended to turn to the teacher for help. Field-independent learners are better at applying their cognitive effort and organising teachers' written feedback and field-dependent learners spend less effort processing the feedback, thus making it less possible for field-dependent learners to make progress based on the feedback. Field-dependent learners' methods of processing feedback are not as methodical, and they are less adept at grasping writing skills; therefore, they also have more difficulty solving the problems presented in their feedback.

#### **4.3 Affective Reaction to Teacher's Written Feedback**

In addition to behavioural and cognitive reactions, learners had different affective reactions to the teacher's written feedback, which were implied by their feelings and judgments of the feedback.

When asked, "Were you willing to receive the teacher's written feedback?", all the participants showed a positive attitude. Although they welcomed the teacher's written feedback, not all participants agreed that the feedback was sufficiently helpful. More than half of the participants said that the teacher's written feedback was constructive for them:

*I wouldn't make progress without the teacher's help. (Student D1)*

*Most of the time, I feel perfect about my essays and can't see any problems with them. The teacher's written feedback made me aware of my errors. (Student IND2)*

These data indicate a positive effect of the teacher's written feedback and explain the reason for learners' attitudes towards feedback. At the same time, some learners from the field-dependent group thought that the written feedback had little effect on them. For example, Student D6 said that the feedback might not be quite helpful in the long term because she forgot it quickly. On this topic, learners from the field-independent group expressed their expectations about the feedback as follows:

*I can't say it's very beneficial. After receiving the teacher's feedback, I still didn't know how to write the essay better. (Student IND4)*

*I thought the teacher just marked the problems in the essay. She didn't give me more details. I thought it would be more effective if the teacher gave me face-to-face feedback. (Student IND5)*

These responses suggest that not all learners received sufficient help from the teacher's written feedback. Learners with higher field dependence tended to perceive the feedback as more helpful and learners with higher field independence expected the feedback to provide more information and assistance.

In addition, learners have different preferences when receiving teachers' written feedback on details or the whole essay. Most participants said they preferred to see feedback on the entire essay. Students D1 and D2 from the field-dependent group said they would turn to feedback on details for convenience in making improvements:

*The structure was difficult to improve so I paid more attention to grammar mistakes. (Student D1)*

*It is natural to turn to grammar first as grammar is fundamental. (Student D2)*

Two other field-dependent participants thought that feedback on precise details and the overall text were equally important. For participants from the field-independent group, all of them viewed feedback on the entire text as more important. They commonly considered the further development of their writing or English learning:

*The feedback on structure, content or thought is much more important [...] As English majors, we should pay more attention to improving our thinking. (Student IND5)*

*The feedback on the entire essay is more important because only teachers or other readers can provide us with this kind of feedback while the problems around details can be solved independently. (Student IND6)*

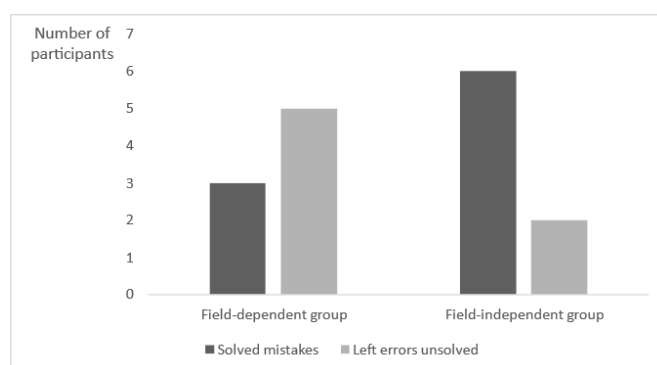
This data shows that some learners have preferences for teachers' written feedback and these preferences were related to their needs. Field-dependent learners did not often

consider improving their writing further. In contrast, field-independent learners considered their further development in writing and clearly emphasised the influence of feedback throughout the whole essay.

In summary, field-independent learners were more critical of the teacher's written feedback and tended to focus more on the most crucial point in the feedback, while field-dependent learners relied more on the feedback and built deeper affective connections with the feedback.

#### 4.4 Learners' Improvement after Receiving Teacher's Written Feedback

After receiving the teacher's written feedback and dealing with it, learners showed different changes in their future writing practices. More than 75% of participants from the two groups who did not alter their writing failed to solve the problems that were pointed out to them. Three of the participants from the field-dependent group who accepted the feedback avoided making the same mistakes, but the other five still had similar issues. Six participants from the field-independent group who accepted the feedback managed to correct their errors or maintain their positive features, while two others still had unresolved issues. Figure 2 presents the results after the learners accepted the teacher's written feedback. The participant who made more revisions solved her problems and showed more progress in her writing.



**Figure 2.** Results of Learners' Reaction after Receiving Feedback

When discussing the improvements, all the participants from the field-dependent group acknowledged the effect of the teacher's written feedback on their progress. Some of them explained that the teachers' written feedback guided them:

*What the teacher said was more professional than what I thought [...] and it gave me guidance. (Student D1)*

*The feedback made me see a direction I hadn't noticed before to improve my writing. (Student D5)*

*Others thought that the feedback helped them solve some problems in language, grammar or other aspects:*

*The teacher's written feedback helped me change the bad habit of using Chinese English. (Student D3)*

*It helped me correct my grammar mistakes. (Student D4)*

Learners with higher field dependence tended to approve of the influence of the teacher's written feedback and improved their writing mainly based on the feedback. However, only two participants from the field-independent group thought that the teacher's written feedback was essential for their progression. Others thought that the teacher's feedback had little influence while the teacher's explanation in class or their effort after class played a more significant role. Some of them outlined their opinions as follows:

*The teacher's written feedback is helpful, but maybe because my ability is limited, I didn't improve a lot through the feedback. (Student IND1)*  
*I made some progress, but I think it's mainly because of my exploration after class. (Student IND4)*

These responses suggest that more field-independent learners did not attribute all their improvements to the teachers' written feedback. Based on the feedback, they tended to think independently and explore their own ways of improving.

Thus, this research showed that field-dependent and field-independent learners reacted to the teacher's written feedback in their own ways and from different perspectives. Their reactions presented various features and they held different views toward the feedback. In addition, their various reactions led to different learning outcomes and they tended to value the feedback more if it was adjusted to their personal needs, indicating the significance of student-center instructions and feedback.

## 5. Discussion

Results of the study demonstrated that field-dependent learners and field-independent learners had their own rationale for reacting to teachers' written feedback, leading to different effects of the feedback.

The behavioural reactions indicated that field-dependent learners mostly accepted the teacher's written feedback. When processing the feedback, they tried to remember the feedback without collecting it and turned to the teacher for help when facing confusion. As for their attitude towards the written feedback, they were willing to receive it and thought it worthwhile. They did not show a clear preference for particular feedback and they largely believed that the teacher's written feedback contributed to their progress. Most field-independent learners accepted the feedback. Some of them gave up on revising their work, and only one of them made more revisions based on the feedback. After that, when processing the feedback, most of them collected feedback and tried to find more ways to solve their confusion in addition to asking the teacher for help. They were also receptive to the teacher's written feedback but preferred the feedback on the whole essay. Though some of them questioned the influence of teachers' written feedback on their progress, most of them managed to avoid similar mistakes and improved their language skills in future writing.

In summary, individuals with different learning styles had similar revision operations after receiving teachers' written feedback. They accepted or ignored the feedback or made more revisions based on the feedback, similar to what Yu et al. (2021) have found. Most

learners accepted the feedback, a few gave up revising and a very small number made more revisions based on the teacher's feedback. Regarding their attitudes, they all held a positive receptive attitude towards the feedback, which is consistent with Chen et al.'s (2016) finding, suggesting that Chinese L2 learners held a favourable attitude toward feedback. The similarity also confirmed Farangi et al.'s (2025) results, proving that both field-dependent and field-independent learners preferred their mistakes to be corrected.

At the same time, field-independent learners tended to maintain the habit of collecting teachers' written feedback and put more effort into processing and organising the feedback while field-dependent learners did not. This difference is consistent with the features of the two learning styles pointed out by Wang (2005), confirming that field-independent learners are more logical and analytical and have more purposefulness, so they can plan how to improve their essays and take advantage of teachers' written feedback. The methods of field-dependent learners are not as methodical, and they are less adept at grasping grammar rules or writing skills, so they have more difficulty solving the problems presented in their feedback. This also led to the results of learners' improvements in this study, which showed that field-independent learners solved more problems in their future writing than field-dependent learners. The results also explain why most previous research indicates better learning outcomes among field-independent learners. In addition, field-dependent learners tended to turn to the teacher for help, while field-independent learners found more ways to solve their problems.

Regarding learners' affective reaction, learners have different preferences when receiving teachers' written feedback on details or the whole essay, as Amrhein and Nassaji (2010) and Chen et al. (2016) have pointed out. Field-independent learners tended to view feedback on the entire essay as more important. This presents various preferences of different learners for written feedback, as Amrhein and Nassaji (2010) have found. However, considering the preferences of learners with different cognitive learning styles, Z. Li and S. Li (2008) claimed that field-dependent learners usually see things from the whole body, while field-independent learners tend to distinguish the parts from the main body and grasp the crucial point. This inconsistency is because although field-independent learners in this research can see the parts from the essay's body, they still pay more attention to the most significant point. They believed that feedback on the whole piece was more crucial for their improvement in English writing, so they thought it was more meaningful and preferred feedback on the whole essay. Besides, field-dependent learners believed that teachers' written feedback contributed to their progress, while field-independent learners valued their own effort more. According to Witkin et al. (1977), field-dependent learners are comfortable in interacting with others. They tend to find solutions in the existing written feedback provided by the teacher, while field-independent learners are better at analysing and paying more attention to the critical points of solving problems. Therefore, field-independent learners prefer to find their own ways to improve and contribute their own effort more, while field-dependent learners tend to appreciate the effect of the teacher's written feedback more.

While field-independent learners seemed to improve more based on teachers' written feedback, the results also imply that it is difficult for learners who do not revise their essays to avoid previous problems, as Andon et al. (2017) have pointed out that written feedback

has pedagogic value when learners take it up and follow it through. The results also confirm the add-on effect of revision on the positive influence of teachers' written feedback (Ekanayaka & Ellis, 2020). In this case, learners should be encouraged to revise their writing to improve their writing skills. After reacting to teachers' written feedback, students with different cognitive learning styles can all make improvements based on their specific features.

Following previous studies, this research confirmed some features of learners with different cognitive learning styles. The features and various reactions led to different learning outcomes and they tended to value the feedback more if it was adjusted to their personal needs, which was similar to Kozlova's (2010) findings. In this case, teachers can consider identifying the cognitive learning styles of their students and provide written feedback that aligns accordingly to help them improve their writing more effectively.

## **6. Conclusion**

This research explored the effects of teachers' written feedback on English learners with different cognitive learning styles. The results indicate similarities and differences between field-dependent and field-independent learners' reactions to teachers' written feedback. Both field-dependent and field-independent learners most commonly accepted the teacher's written feedback. They all considered the teacher's written feedback willingly, carefully read it, tried to remember its crucial points, and believed they had improved their writing. Meanwhile, they had different reactions to the teacher's written feedback related to their cognitive learning styles and the various reactions led to differences in the influence of the feedback.

Regarding the differences, field-dependent learners relied more on teacher feedback. They always turned to the teacher for help and attributed their progress to the teacher's written feedback. Field-independent learners focused more on the whole essay, expected more from the teacher's written feedback and maintained a habit of collecting feedback. They tended to react to the feedback more independently and attributed their progress more to their efforts. They corrected their mistakes slightly more effectively. Therefore, English teachers should try to provide more suitable and student-focused written feedback to better support learners in improving their English writing. For field-dependent learners, a more precise explanation of mistakes or shortcomings can be provided in written feedback to help learners better understand their problems. For field-independent learners, teachers can pay more attention to their needs and provide more appropriate feedback, such as including more details or practical suggestions.

This study shows the possibility that similarities and differences exist between the reactions of field-dependent and field-independent learners to a teacher's written feedback in English writing. This offers a potential basis for further investigation into the relationship between learning styles and learners' reactions to feedback in foreign language learning. Future research may include more participants with various learning conditions and the suggestions in this research can also be examined to help English teachers improve their methods of providing feedback.

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