

The impact of written corrective feedback on students' writing performance, self-efficacy, and anxiety

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Abstract: This paper investigated the impact of direct unfocused written corrective feedback (WCF) on EFL students' writing improvement, self-efficacy, and anxiety. To this aim, 52 Iranian male learners were selected as participants by using the Oxford Placement Test and randomly placed in an experimental and a control group. The participants completed a pre-test that included a writing task, the writing self-efficacy questionnaire (WSEQ), and the Second Language Writing Anxiety Inventory (SLWAI) to assess their writing skill, writing self-efficacy, and writing anxiety, respectively. Having attended 15 sessions of writing instruction in which only the experimental group received WCF, the participants again completed a writing task, the WSEQ, and the SLWAI in the posttest procedure. The results showed that the experimental group outperformed the control group in all three constructs, indicating that WCF has a positive impact on EFL students' writing performance, self-efficacy, and anxiety. Implications of the study are presented.

Keywords: writing performance, direct unfocused WCF, self-efficacy, anxiety, second language acquisition



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1. Introduction

Written corrective feedback (WCF) employed as a strategy by EFL teachers has given rise to a controversial debate for the last three decades (Reinders & Mohebbi, 2018). A group of scholars (e.g., Berg, 1999; Hyland, 2000; Kepner, 1991; Lee, 2009; Sheppard, 1992; Truscott, 1996, 2007) argue against providing students with WCF. The arguments against WCF provision include wasting class time, undermining the writing task authenticity, causing learners to avoid complex structures, and ignoring learners' autonomy and responsibility for their learning. On the other hand, many consider it as a nonnegotiable pedagogical strategy for enhancing L2 learners' writing skills. The benefits of WCF reported by EFL researchers and teachers (e.g., Bonilla López, Van Steendam, Speelman, & Buyse, 2021; Chong, 2017; Dowden, Pittaway, Yost, & McCarthy, 2013; Ghane & Mazdayasna, 2022; Zhang, 2022) include improving learners' writing skills, promoting students' engagement in the pedagogical process, and accommodating learners' emotional responses, the most important of which are writing self-efficacy and writing anxiety. In fact, correcting learners' errors and providing them with the accurate form can broaden their linguistic repertoire, elevate their sense of writing self-efficacy, and reduce their anxiety (Paul, Lin, Ha, Chen, & Newell, 2021).

In L2 writing pedagogy, WCF has been widely used as an intervening strategy. According to Bitchener (2008), Chandler (2000), and Ferris (1995), WCF can be used to scaffold L2 learners and enhance their writing skill. Additionally, learners expect their teachers to provide them with feedback and teachers resort to feedback as a crucial pedagogical resource in writing instruction (Cheng & Zhang, 2021a, b; Ghane, Mazdayasna & Jabbari, 2021; Li, Zhang & Parr, 2020). Effective WCF, specifically, helps learners have a deeper understanding of their weaknesses and strengths in their writing tasks and assists them in improving their writing outcome. It is particularly conceived effective for long-term instruction of language writing (van Beuningen, de Jong, & Kuiken, 2012; Hyland & Hyland, 2019).

WCF is classified into two common types: direct and indirect. Direct feedback involves exposing learners to explicit correct form for language components, while indirect feedback only points out the error without providing a correction (Bitchener, 2018). Although indirect feedback guides learners into problem-solving through reflection upon their learning activities, direct feedback is advocated on the grounds that it helps reduce confusion for learners, as learners can easily compare and contrast their produced linguistic forms with the provided WCF (Bitchener, 2008).

Investigations examining WCF benefits are, further, of either focused or unfocused scope. In focused scope research, either a single linguistic feature or a limited number of linguistic features are targeted for correction. This research strand exists profusely in the literature (e.g., Bitchener, 2008; Bitchener & Knoch,

2009; Ellis, Sheen, Murakami, & Takashima, 2008; Ferris, 2010; Ferris & Roberts, 2001; Sheen, 2007, to name a few). The rationale to provide correction on a limited number of features rests on Skehan's (1998) argument that learners' cognitive capacity is limited in processing L2 features. The findings of majority of such research show positive effects of WCF on learners' accuracy in writing.

By comparison, research dealing with unfocused (comprehensive) WCF, whereby correction of learners' every error is leveraged as a potential for language learning, is scanty. As unfocused WCF pertains to what teachers are actually implementing in their daily practice (Chen, Nassaji, & Liu, 2016), more studies need to investigate it. To the best of our knowledge, only a few studies (e.g., Beuningen, de Jong, & Kuiken, 2012; Ghane, Mazdayasna & Jabbari, 2021; Khanlarzadeh & Nemati, 2016; Truscott & Hesu, 2008; Zaini and Mazdayasna, 2015) have examined the effect of unfocused WCF on writing quality enhancement.

In a study, van Beuningen, de Jong, & Kuiken (2012) studied the effect of unfocused WCF on 268 Dutch learners of a foreign language. The findings suggested that the learners receiving WCF benefited much more in both short and long-term accuracy developments than those not receiving feedback, that is, those who engaged in self-editing without feedback (control group 1), and those who engaged in mere writing practice without feedback (control group 2). They also found that direct WCF type led to learners' grammatical accuracy enhancement during both revising and writing new tasks, while indirect WCF type led to learners' enhancement in non-grammatical enhancement. Moreover, WCF did not end in structural simplification in students' new pieces of writing.

Zaini and Mazdayasna (2015) examined the effects of direct unfocused WCF on students' writing tasks. In their study, the experimental group wrote on screens while the control group wrote on paper throughout the semester. The experimental group received written feedback from both the teacher and the Microsoft Word office (MWO), while the control group only received feedback from the teacher. Zaini and Mazdayasna concluded that the provision of unfocused WCF on different writing tasks was beneficial for both groups, with the experimental group even making more progress.

In another study, Khanlarzadeh, and Nemati (2016) investigated the effect of WCF on EFL elementary students' grammatical accuracy over a three-month treatment period. During the treatment, students wrote on eight topics, and the experimental group received direct unfocused WCF while the control group did not. The findings indicated that the experimental group outperformed the control group in revising three writing tasks, indicating the effectiveness of WCF. However, there was no significant difference between the two groups in the revision of tasks when no feedback was presented. The authors concluded that in addition to providing WCF, it is crucial for teachers to have a follow-up interaction with

students so that they can have a deep understanding of the corrections provided, helping them to succeed in future writing tasks.

By contrast, Truscott and Hsu (2008) found, in a study on the writing performance of L2 learners in an ESL context, that despite being effective during the revision process, indirect unfocused WCF effect was not durably and equally evidenced while writing texts with new topics. On account of the partially conflicting findings and scarcity of research on the potential of unfocused WCF for language learning, which includes correcting every error in learners' writing tasks, further research requires to be conducted to enrich our insight into the issue.

Moreover, the constructs of self-efficacy and anxiety have been found to enormously affect foreign language learning (Baskan, 2021; Ghonsooli & Elahi, 2010; Mills, Pajares & Herron, 2006). While unfocused WCF is in line with teachers' daily practice, some teachers are worried about the possibility that unfocused WCF overwhelm students and thus decrease their self-efficacy and increase their anxiety (Shahidzade, Razmi, & Tilwani, 2022). Therefore, teachers play a pivotal role in providing WCF to students, shaping their learning experiences and perceptions of their writing abilities. It is essential to consider how the nature of WCF, whether focused or unfocused, can affect students' self-efficacy and anxiety levels. Some teachers may worry that unfocused WCF could overwhelm students, leading to decreased self-efficacy and increased anxiety levels during writing tasks (Kirmizi, & Kirmizi, 2015).

Additionally, in the context of EFL teaching, the relationship between written corrective feedback (WCF) and students' self-efficacy and anxiety is a complex and multifaceted aspect that plays a crucial role in shaping students' writing development and emotional responses (Bai, Wang, & Nie, 2021). WCF, as a form of feedback provided by teachers to correct errors in student writing, goes beyond its immediate goal of improving writing accuracy (Chen, Nassaji, & Liu, 2016). It can significantly impact students' emotional well-being, self-perceptions, and overall writing performance (Di Loreto & McDonough, 2014).

Research has shown that the nature and effectiveness of WCF can have a direct influence on students' writing self-efficacy and anxiety levels (Di Loreto & McDonough, 2014; Ruegg, 2018; Schunk & Swartz, 1993). When students receive timely and constructive feedback that is focused on specific aspects of their writing, they are more likely to develop a sense of competence and confidence in their writing abilities. This positive reinforcement from effective WCF can lead to an increase in students' self-efficacy beliefs, motivating them to engage more actively in the writing process and strive for improvement (Sökmen, 2019).

Conversely, ineffective WCF may have detrimental effects on students' self-efficacy and anxiety. When feedback is vague, overwhelming, or inconsistent, students may feel discouraged, uncertain about their writing skills, and anxious about making further mistakes (Bitchener, 2018). This can create a cycle of negative

emotions and self-doubt that hinders students' willingness to take risks, experiment with language, and engage fully in the writing task (Tsao, Tseng, & Wang, 2017).

Furthermore, the relationship between WCF, self-efficacy, and anxiety is interconnected. High levels of self-efficacy are often associated with lower levels of anxiety, as students who believe in their ability to succeed are more likely to approach writing tasks with confidence and resilience (Woodrow, 2011). Effective WCF that reinforces students' sense of competence can help alleviate anxiety by providing clear guidance, support, and encouragement throughout the writing process (Zhang, 2019).

Therefore, understanding how WCF influences students' self-efficacy beliefs and anxiety levels is essential for educators to design feedback strategies that not only improve writing skills but also nurture students' emotional well-being and confidence in their writing abilities. By exploring this dynamic relationship in the context of EFL teaching, educators can tailor feedback practices to empower students, reduce anxiety, and promote a positive learning environment conducive to writing development (Zimmerman & Bandura, 1994).

In a broad perspective, self-efficacy is associated with initiating and persisting with a task in the face of adverse conditions. Anxiety, furthermore, is classified into situational, trait, and state types. Self-efficacy tempts learners to get deeply involved in learning tasks. Given the integral role of self-efficacy in second language writing engagement, researchers (e.g., Bai, Wang, & Nie, 2021; Han & Hiver, 2018; Pajares & Johnson, 1996; Woodrow, 2011) maintain that boosting learners' self-belief to write in English is a significant factor in enhancing their writing skill. Communicating one's purpose efficiently through writing in English is a crucial part of language learning. Because of its contributing role in learning a second language, research suggests that effective treatment of writing can offer a promising path for learners' progress (Hyland, 1996; Naghdipour, 2016). Thus, to communicate effectively, EFL learners might need to heighten their self-efficacy in writing, which is resonant with Ghane and Mazdayasna (2022), and Grenner, Johansson, Weijer, and Sahlén (2021) who found out that self-efficacy influences learners' writing dispositions. In a similar vein, Sökmen (2019) found that self-efficacy can help learners of a foreign language better engage in learning tasks. While previous studies have examined the role of self-efficacy in improving writing skill, research specifically focusing on the effect of WCF on learners' writing self-efficacy is limited (Reugg, 2018). Therefore, investigating the impact of WCF on writing self-efficacy is an underdeveloped area that requires further research. This requirement stands further out on account of Connors & Lunsford's (1993) argument that providing learners with WCF may damage their self-confidence as it comes as a kind of criticism to their writing tasks.

According to Blankenstein et al. (2019) and Zimmerman and Bandura (1994), writing self-efficacy refers to the degree of confidence that learners have to meet writing standards and successfully complete writing tasks. That said, learners who

engage in writing to join the discourse community are highly efficacious writers and take on strategies to heighten their writing quality. Such learners typically view writing a major element in their future success, struggle with predicaments in the course of writing, and are prone to triumph in their academic lives.

By extension, as students develop high levels of writing self-efficacy in the course of their education, they will be likely to succeed in a variety of writing tasks. For instance, Ghane and Mazdayasna (2022) in a study reported that the EFL students with higher self-efficacy in writing were more successful in writing their thesis proposals. This suggests that students with a stronger writing self-efficacy are likely to excel in broader range of writing activities.

Another notable variable likely to challenge the writing performance is anxiety. In language learning, it is commonly associated with apprehension, distress, and emotional discomfort (Asif, 2017; Huerta, Goodson, Beigi, & Chlup, 2017). Alpert and Haber (1960) categorized anxiety into “facilitative” and “debilitative” anxiety. According to Scovel (1978), the former prompts learners to exert more effort to reduce their anxiety. Mousapour Negari and Talebi Rezazadeh (2012) and Yahya (2013) demonstrated that facilitative anxiety plays a positive role in learning a language. However, debilitative anxiety can have a negative impact on language learning. Learners who experience debilitative anxiety may resort to avoidance strategies to flee the source of their anxiety (Eysenck, 1979; Scovel, 1978).

As a complex learning task, writing can also cause learners to experience varying degrees of anxiety. As a result, L2 writing anxiety can be held responsible for writing performance variance amongst learners (Cheng, 2002; Huerta et al. 2017; Tsiritakis et al., 2017). Daly (1978) defines writing anxiety as “a situation- and subject-specific individual difference concerned with people’s general tendencies to approach or avoid writing” (p. 11), which can either facilitate or debilitate a student’s writing performance (Bayat, 2014; Teimouri, Goetze, & Plonsky, 2019). According to Tsao, Tseng, and Wang (2017), high level of L2 anxiety adversely affects students’ L2 writing. In a study examining the relationship between the anxiety levels and writing performance, Shang (2013) suggested that students generally experience anxiety when writing in English, and highly apprehensive learners tend to receive negative evaluations. Accordingly, learners afflicted with this negative emotion are dissatisfied with their writing activities and may avoid complex ideas while writing, leading to inadequate efforts to improve their writing skills (Tsao et al., 2017, as cited in Tahmouresi & Papi, 2021). This is because anxiety can be overwhelming for learners when they are required to communicate a purpose in a foreign language due to unfamiliarity and lack of sufficient expertise. However, learners’ anxiety can be mitigated through provision of effective knowledge of writing construction (Taffs & Holt, 2013; Zhang, 2019). For instance, in a genre-based instruction of L2 writing, Han and Hiver (2018) found that participants initially experienced an increase in writing anxiety when asked to complete an independent composition.

The researchers attributed this increase to the learners' lack of experience in L2 writing and unfamiliarity with genre's language conventions. They continued that by providing sufficient resources in terms of rhetoric, grammar, and lexicon, the learners can get familiarized with L2 writing, which consequently leads to their writing anxiety alleviation. By contrast, Truscott (1996) raised anxiety concerns about teacher WCF. He argued that WCF inhibits learning, as it leads to increased anxiety in learners which might discourage them from engaging in new writing tasks. According to him, WCF might also result in learner avoidance strategy, as a result of which learners avoid reusing structures and content found by the teacher as awkward.

There is another line of research, on the other hand, reporting conflicting results concerning writing anxiety and interest (e.g., Cocuk, Yanpar-Yelken, & Ozer, 2016; Mohebbi, Azarnoosh, & Abdolmanafi Rokni, 2016; Shang, 2013). For example, Cocuk et al. (2016) found that Turkish students' writing anxiety was positively related to their writing disposition, with higher levels of interest in the course being associated with higher levels of anxiety. These conflicting findings regarding the relationship between writing anxiety and writing interest may be due in part to the provision of written WCF and the type and manner in which it is presented to learners, as well as learners' proficiency levels.

Given the conflicting findings on the effectiveness of WCF in improving learners' writing skill and reducing their writing anxiety, further research is required for better understanding this issue. Additionally, as research on the effect of WCF on writing self-efficacy is scanty, research is required to cover this lacuna. Therefore, this study aimed to investigate the effectiveness of WCF on writing skill, self-efficacy, and anxiety among EFL learners in Iran. The following research questions guided the aims of the current study:

- RQ1. Does WCF render any major effects on Iranian EFL learners' writing skill?
- RQ2. Does WCF render any major effects on Iranian EFL learners' writing self-efficacy?
- RQ3. Does WCF render any major effects on Iranian EFL learners' writing anxiety?

2. Method

2.1 Participants

52 EFL male students (age range of 12-18), selected among 82 students based on the Oxford Placement Test (OPT) results in an English institute, constituted the participants in this study. Their scores ranged from 41 to 52 and were at the level B1 as measured by OPT. They expressed their willingness to participate in this study and reported no prior rigorous writing experience, which was also confirmed in the pre-test administered at the beginning of the program. They were randomly placed

in either an experimental group who received WCF or a control group who did not receive any feedback. Their socioeconomic status was comparable and all obtained a signed consent form from their parents to participate in the study.

2.2 Instruments

To accommodate for the purposes of this study, several instruments were applied. Initially, the OPT was administered to all 82 students to assess their language proficiency and ensure their homogeneity. Students were determined to be at B1 level as their scores ranged between 41 and 52 on the OPT (Allen, 2004). The selected students were randomly divided into an experimental and a control group. To determine the students' English writing proficiency baseline, the initial session was held with the students' presence at the institute, as the other sessions were held online. During this session, the students were given the topic "Write on the causes of stress on high school and university students" as a pre-test writing assignment. Similarly, the seventeenth session was held with the students' presence at the institute as well, which served as the final session. In this session, the students were again given the same topic to write on as a post-test, enabling a comparison of their writing proficiency before and after the instruction.

The third instrument utilized in this study was a writing self-efficacy questionnaire (WSEQ). Employed by Pajares, Hartley, and Valiante (2001), WSEQ is a 10-item questionnaire graded on a Likert scale with 6-points (from 1= no confidence at all to 6 = completely confident). The WSEQ measures four subscales, namely grammar, usage, composition, and mechanical skills. Pajares et al. (2001) reported the reliability coefficient of 0.87 for the questionnaire. To facilitate the administration process, the scale was translated into Persian to be read and responded in Persian. To validate the Persian questionnaire, a professional translator was enlisted to translate the Persian WSEQ back into English. The back-translated version was found to closely resemble the original wording, providing evidence of the questionnaire's equivalence across the two languages. Next, the Persian questionnaire was piloted on a group of twelve students with similar qualities in terms of demographics and proficiency level at another institute, and its reliability was calculated using Cronbach's alpha to be 0.801.

The Second Language Writing Anxiety Inventory (SLWAI) was the last tool used in this study. As an extensively used tool, this 22-items questionnaire, developed by Cheng (2004), is based on a Likert scale (1= strongly disagree to 5= strongly agree). There are three subscales in this scale: Somatic Anxiety (SA), Avoidance Behavior (AB), and Cognitive Anxiety (CA). Total score for SLWAI is obtained by summing up the individual item scores. A higher score is an indication of higher L2 writing anxiety. Cheng (2004) reported the internal consistency values of SLWAI, calculated through Cronbach's alpha, as follows: overall anxiety measure: 0.91, SA: 0.88, AB: 0.88, and CA: 0.83. Like the WSEQ, this instrument also underwent a translation into

Persian and a back-translation process; the version retranslated into English mirrored the wording of the original questionnaire indicating that the Persian questionnaire can be considered equivalent to the original version in English. To check the validity of the translated version, a pilot administration was conducted, which yielded a Cronbach's alpha reliability coefficient of 0.89.

2.3 Procedure

To begin with, 52 male learners whose proficiency level was determined B1 as measured by OPT were selected from a total of 82 learners at an English language institution in Yazd. The chosen learners were randomly grouped into an experimental ($n = 26$) and a control group ($n = 26$) to ensure that any differences in proficiency were controlled. Two days after the OPT administration, the first session was held in which all the experimental and control students were present in a large hall, and the pre-tests were administered. First, the topic was assigned to them as the pre-test. They were given 50 minutes time to expand their ideas on the topic. Nearly all the students sat until the last minutes. In fact, at the beginning of the investigation, the writing pre-test was applied to check the learners' writing proficiency. Next, the self-efficacy questionnaire was distributed among the learners to assess the impact of WCF on their writing self-efficacy. Additionally, the SLWAI was administered to all the students prior to the treatment to realize the effect of WCF on writing anxiety. The entire process took approximately 70 minutes. The same procedure was repeated in the last session, and the tests were re-administered as the posttests (see Figure 1). The whole study lasted for nine weeks.

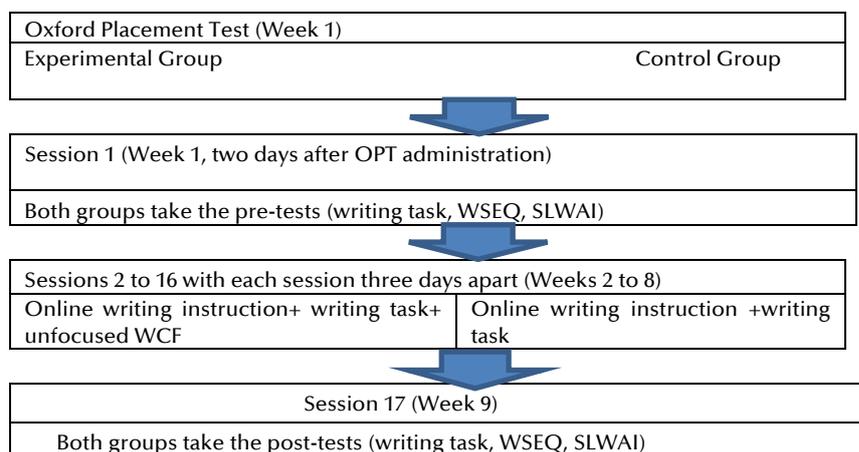


Figure 1. Procedure of the study.

From session two to sixteen, which were held with three days apart, both groups underwent biweekly (two sessions per week) online instruction for 15 sessions, with each session lasting 60 minutes. During the 15 instructional sessions, the first researcher of the study served as the EFL instructor for all participants. Both the experimental and control groups received instruction on writing topic sentences, developing relevant supporting ideas, and composing cohesive and coherent texts. Moreover, the participants were familiarized with common patterns of rhetoric found in expository writing such as advantages, disadvantages, cause-effect, comparison and contrast, description, and enumeration, in order to improve their writing proficiency. The students were instructed on how to produce cohesive paragraphs by means of cohesive resources, conjunctions, and discourse markers. In this manner, they realized how to clearly express their ideas in their writing texts. Furthermore, both groups were assigned an identical homework topic for every session. The teacher tried to select interesting topics within the students' writing competence and favor (for instance, the importance of computers in modern life), and they were advised to review their tasks several times before submitting them. The students submitted their completed pen and paper assignments to the teacher through email. The experimental group students were provided with WCF on their writing tasks; they were asked to review their corrected papers for about ten minutes and ask questions if they had any about the provided corrections. Indeed, only a few students sporadically revised their papers, as it was not mandatory, and consulted the teacher the following session. On the other hand, the learners in the control group were not provided with any WCF and had only the opportunity to ask their questions concerning their writing tasks if they had any. Students, specifically the WCF group, asked questions on verb tense, passive voice, articles, plurals, connectors, mechanics, etc. Also, the teacher periodically compared the students' current writing tasks with their previous ones to demonstrate their progress and encourage them to continue learning.

The provided WCF covered various aspects of writing, including grammar, organization, content, mechanics, and diction. Errors concerning the wrong use of articles, tense, word choice and order, verb form, etc. were identified, and the correct forms were provided. Additionally, the experimental students received feedback on their topic sentence, supporting ideas, cohesion, and coherence. Figure 2 shows an example of the actual comments provided.

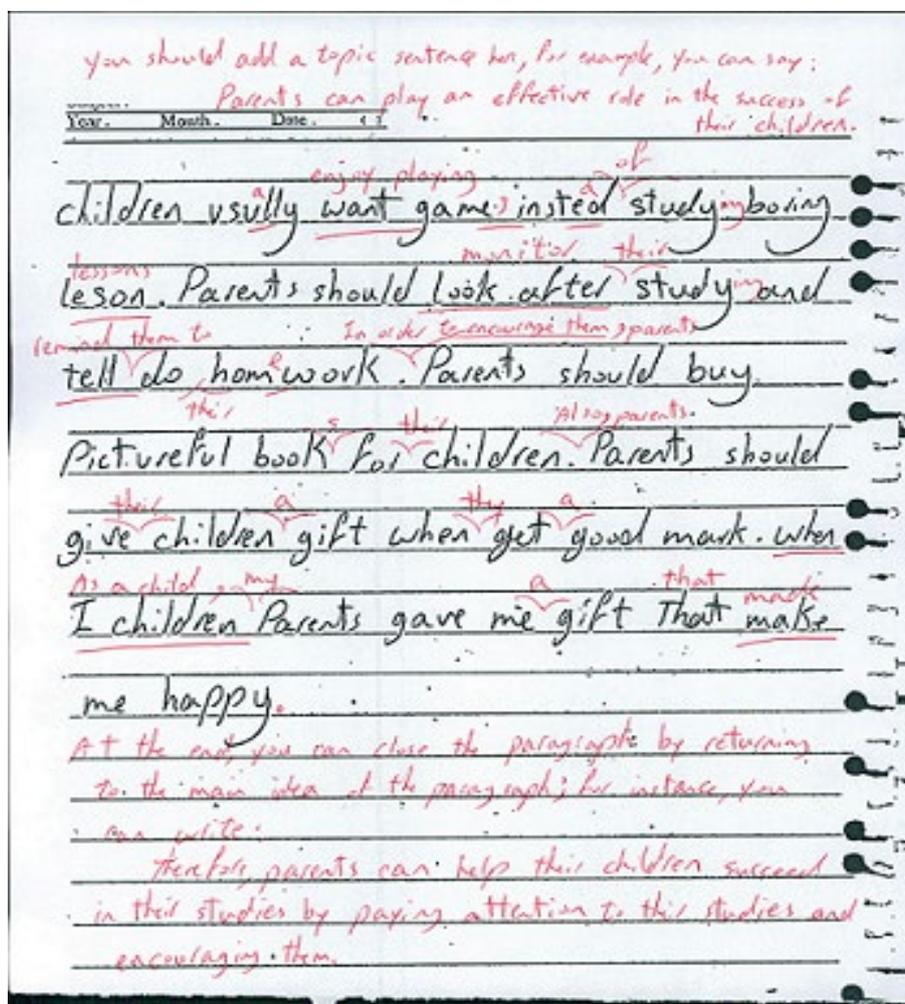


Figure 2. An example of WCF provision.

Additionally, to follow ethical issues in the treatment in terms of providing WCF to all participants, WCF was also made available for the control group at the end of the study.

The writing tasks, both pre-tests and post-tests, were blindly graded by two English teachers with over five years of teaching experience. The raters were not informed of the teaching procedure or the learners involved in the study, and all the tasks were mixed together with no indication of when they had been written. The tasks were rated using the ESL composition profile by Jacob et al. (1981), which is a popular and reliable rating scale for writing tasks among language teachers and

researchers (Brooks, 2012; Ghanbari, Barati & Moinzadeh, 2012). This scale assesses five components, including content (0-30), organization (0-20), vocabulary (0-20), language use (0-25), and mechanics (0-5). Based on the mentioned factors, each writing task was scored and given a score out of 100. The inter-rater reliability was calculated through a bivariate correlation and reached 0.84, indicating a relatively high level of agreement between the two raters.

3. Results and discussion

Initially, the amount of WCF provided to the experimental group throughout the semester was considered. Table 1 presents the descriptive statistics of the provided WCF and the learner uptake (in brackets). The instances of WCF are presented separately for each language component, namely, content, organization, vocabulary, grammar, and mechanics.

Table 1. Amount of WCF focusing on the language components and learners' uptake.

	Min	Max	Mean per person	SD
Content	3(1, %50)	6(5, %40)	4.48 (3.4, %73)	1.06 (1.18)
Organization	2(1, %20)	3(3, %90)	2.44 (2.6, %86)	2.03 (.83)
Vocabulary	5(1, %20)	13 (9, %40)	8.60 (7.4, %68)	3.04 (2.8)
Grammar	4(1, %30)	20(15, %20)	14.11 (13.3, %62)	6.12 (5.4)
Mechanics	4 (2, %10)	15 (8, %90)	8.47 (5.9, %79)	3.52 (2.04)

As Table 1 shows, a wide range existed between the minimum and maximum number of feedback instances and the learners' uptake was relatively high.

Once the data was collected, the scores were checked for normal distribution and homogeneity of variance. Since these assumptions were met, the parametric tests (paired samples t-test and independent samples t-test, in this case) could be used for analysis.

We analyzed the learners' pretest scores on writing skill, self-efficacy, and anxiety using independent samples t-tests to ensure homogeneity among the learners (Table 1).

As illustrated in Table 2, the pre-test mean scores of the experimental group on the writing skill, writing self-efficacy, and writing anxiety were 52.73, 34.15, and 78.88 and the control group's mean scores for the same constructs were 53.73, 32.50, and 73.42, respectively. The statistics indicated non-notable difference between the two groups regarding the scores they gained on writing skill pretest, $t(50) = 0.253$, $p > 0.05$, writing self-efficacy, $t(50) = 0.530$, $p > 0.05$, and writing anxiety, $t(50) = 1.356$, $p > 0.05$. Therefore, it could be realized that the participants in the two groups were approximately homogeneous in writing skill, writing self-efficacy, and writing anxiety.

Table 2. T-test results of writing skill, self-efficacy, and anxiety pretests of experimental and control groups.

	Groups	N	M	SD	t	df	Sig.
Writing skill pretest	Experimental	26	52.73	12.60	0.253	50	0.801
	Control	26	53.73	15.74			
WSEQ	Experimental	26	34.15	10.56	0.530	50	0.598
	Control	26	32.50	11.89			
SLWAI pretest	Experimental	26	78.88	13.68	1.356	50	0.181
	Control	26	73.42	15.30			

To address the three research questions of the study, the collected data were analyzed using two methods. Firstly, independent sample t-tests were carried out on the posttest results to determine whether the two groups' outputs differed significantly on the writing performance, writing self-efficacy, and writing anxiety levels (Table 3). Next, paired-sample t-tests were used to compare the performance of each group on the mentioned measures between the pre-and post-tests (Tables 4 and 5). This method allowed for the examination of the within-group differences over time. By using both independent sample and paired-sample t-tests, we were able to provide a comprehensive analysis of the impact of WCF on the above-mentioned measures.

To compare the experimental and control groups' posttest results, independent sample t-tests were applied (Table 3).

Table 3 demonstrates that the experimental group outperformed the control group in terms of writing performance, as indicated by the statistically significant difference between their mean scores, $M = 79.34$, $SD = 11.14$ vs. $M = 62.53$, $SD = 14.32$, $t(50) = 4.722$, $p < 0.05$, $d = 1.32$. Furthermore, the experimental group reported higher levels of writing self-efficacy, $M = 51.30$, $SD = 7.29$ compared to the control group, $M = 42.15$, $SD = 9.64$, with a statistically significant difference, $t(50) = 3.858$, $p < 0.05$, $d = 1.08$. Similarly, the experimental group demonstrated a significant decrease in writing anxiety, as evidenced by their lower mean score on the posttest anxiety assessment, $M = 49.96$, $SD = 18.75$ compared to the control group, $M = 71.19$, $SD = 14.91$, with a statistically significant difference, $t(50) = 4.518$, $p < 0.05$, $d = 1.26$.

Table 3. T-test results of writing skill, self-efficacy, and anxiety posttests of experimental and control groups.

	Groups	N	M	SD	t	df	Sig.	d
Writing skill	Experimental	26	79.34	11.14	4.722	50	.<.001	1.32
	Control	26	62.53	14.32				
WSEQ	Experimental	26	51.30	7.29	3.858	50	.<.001	1.08
	Control	26	42.15	9.64				
SLWAI	Experimental	26	49.96	18.75	4.518	50	.<.001	1.26
	Control	26	71.19	14.91				

Next, to compare the scores of each group between the pretests and posttests, six paired sample t-tests were carried out. First, Table 4 presents the results for the control group.

The results in Table 4 indicate a statistically significant improvement in the control group's mean score for writing task, pretest $M = 53.73$, $SD = 15.74$; posttest $M = 62.53$, $SD = 14.32$, $t(25) = 14.870$, $p < 0.001$, $d = 0.58$, and writing self-efficacy, pretest $M = 32.50$, $SD = 2.33$; posttest $M = 42.11$, $SD = 9.45$, $t(25) = 8.721$, $p < 0.001$, $d = 1.63$. However, there was no significant improvement in the control group's mean score for writing anxiety, pretest $M = 73.42$, $SD = 15.30$; posttest $M = 71.19$, $SD = 14.91$, $t(25) = 1.850$, $p > 0.05$, $d = 0.14$. These findings suggest that the writing instruction provided to the control group was effective in improving their writing skills and self-efficacy, but not their writing anxiety.

Table 4. Results of paired-samples t-test of control group's pre-and posttest scores

		N	M	SD	t	df	Sig.	d
Writing skill	Posttest	26	62.53	14.32	14.870	25	.<.001	.58
	Pretest	26	53.73	15.74				
WSEQ	Posttest	26	42.11	9.45	8.721	25	.<.001	.631
	Pretest	26	32.50	2.33				
SLWAI	Posttest	26	71.19	14.91	1.850	25	.076	.14
	Pretest	26	73.42	15.30				

Finally, the comparison of the experimental group's performance between the pre- and post-test measures is presented in Table 5.

As can be seen in Table 5, the results indicate significant improvements in all three measures. Specifically, the experimental group's mean score for writing task

increased significantly from pretest, $M = 52.73$, $SD = 12.60$ to posttest, $M = 79.34$, $SD = 11.14$, $t(25) = 19.571$, $p < 0.001$, $d = 2.24$. Similarly, the mean score for writing self-efficacy significantly improved from pretest, $M = 34.15$, $SD = 10.56$ to posttest, $M = 52.46$, $SD = 6$, $t(25) = 13.888$, $p < 0.001$, $d = 2.21$. Finally, the mean score for writing anxiety also decreased significantly from pretest, $M = 78.88$, $SD = 13.68$ to posttest, $M = 49.96$, $SD = 18.75$, $t(25) = 13.886$, $p < 0.001$, $d = 1.78$. These findings suggest that WCF had a positive impact on the experimental group's writing skills, self-efficacy, and anxiety levels.

Table 5. Results of paired-samples t-test of experimental group's pre-and posttest scores

		N	M	SD	t	df	Sig.	d
Writing skill	Posttest	26	79.34	11.14	19.571	25	.<001	2.24
	Pretest	26	52.73	12.60				
WSEQ	Posttest	26	52.46	6.00	13.888	25	.<001	2.21
	Pretest	26	34.15	10.56				
SLWAI	Posttest	26	49.96	18.75	13.886	25	.<001	1.78
	Pretest	26	78.88	13.68				

Upon comparing the data presented in the aforementioned tables, it was found that both the experimental and control groups exhibited progress in their writing ability and self-efficacy, but the eta square statistics in Tables 4 and 5 suggest that the experimental group performed better than the control group. Additionally, Table 4 indicates that the control group did not exhibit any significant improvement in their writing anxiety, while the experimental group did (Table 5). The most noteworthy finding, however, is that the experimental group outperformed the control group in all three measures with larger effect size, as evidenced by the results of independent sample t-tests (Table 3).

In sum, the present study's results suggest that providing students with WCF can lead to significant enhancements in their writing ability, as well as improvements in the psychological aspects of writing self-efficacy and anxiety. These findings align with previous empirical research, such as studies conducted by Bitchener (2008), Han and Hyland (2015), Kang and Han (2015), Lee (2004), and Nassaji (2018), which have also demonstrated progress in English learning resulting from the use of WCF.

More specifically, the results of this study also concur with those of van Beuningen, de Jong, and Kuiken (2012), Zaini and Mazdayasna (2015), and Ghane, Mazdayasna & Jabbari (2021) who found positive effects of unfocused WCF on students' writing tasks. Notably, however, there is a disagreement between the results of this study and the studies mentioned as far as the magnitude of effect size is concerned; for instance, van Beuningen, de Jong, and Kuiken (2012) reported $d =$

1.85 and 2.35 for the effect of unfocused WCF on grammatical and non-grammatical accuracy respectively, which are higher than the effect size found in this study. The reason might be that the present study, as opposed to the mentioned studies, did not provide learners with opportunities to revise their papers. Therefore, it can be assumed that engaging learners in revising their papers can boost the effect of direct unfocused WCF. The findings of this study, further, support Khanlarzadeh and Nemati (2016) who accentuated teachers' follow-up interactions with students as effective along with WCF for their future writing tasks. Indeed, the students in this study had the chance to ask their questions regarding the provided WCF and figure out their writing problems better.

The results of this study, however, appear in contrast to those of Kepner (1991) and Truscott (2007) who argued that WCF causes either negative effect on learners, or most optimistically has very small benefits which render presenting it worthless. The results, more specifically, conflict Truscott and Hsu (2008) who argued WCF effectiveness appears merely during revision and is not evidenced while writing texts with new topics. The results of this study contradict with the mentioned studies since, as Gass (2003) believes, for learning a second language, negative evidence and output are required. Through negative evidence, the learners can realize there was an error in their utterance. Language production, on the other hand, assists learners in moving from semantics to syntactic; in other words, learners have to employ syntactic constructions to generate sentences. As a result, the learners in the experimental group were exposed to the negative evidence (WCF) which made it possible for them to learn the correct structures and lexicon effectively. The control group learners, conversely, were not provided with this opportunity leading to their lower level performance.

Regarding the level of self-efficacy, the study results demonstrated that both groups made progress, but the experimental group significantly outperformed the control group (as shown in Table 3) due to the consistent WCF provided by the instructor. This finding supports the views of experts in social cognitive theory, such as Pajares (2003) and Schunk and Swartz (1993), who contend that exposure to feedback can enhance self-efficacy.

This finding is also in line with Ruegg's (2018) study, which compared the impact of teacher and peer L2 writing corrective feedback on two groups of Japanese university students. The results of pre- and post-treatment questionnaires indicated that the teacher WCF intervention was more effective in enhancing the learners' writing self-efficacy than peer WCF. However, this finding contradicts the belief held by many experts, such as Andrade and Evans (2013), Ferris (2002), and Hyland and Hyland (2001), who suggest that learners may feel less self-efficacious with increased feedback.

The increase in self-efficacy observed in both groups of learners may be linked to the instructor's use of occasional positive feedback, which involved comparing

their writing to their previous efforts and highlighting their progress. This approach is consistent with the recommendations of scholars such as Ferris (1995, 2003) and Hyland (1998). However, the instructor also made an effort to balance the amount of praise given so as not to diminish the learners' enjoyment or motivation for writing, as cautioned by Cohen (1987) and Hyland (1996).

According to the results of paired-samples t-tests, the experimental group demonstrated a statistically significant improvement ($p < 0.05$) in their writing anxiety, while the control group did not ($p > 0.05$). This outcome can be attributed to the provision of WCF, which was only given to the experimental group in this study, as supported by Taffs and Holt (2013) and Zhang (2019). This finding aligns with the work of Di Loreto and McDonough (2014), who observed a negative relationship between positive perceptions of feedback and writing test anxiety. Furthermore, this result supports the claims of Kirmizi and Kirmizi (2015) that L2 writing anxiety is linked to lower self-efficacy, as the control group appeared to have lower self-efficacy than the experimental group in this study. The high levels of anxiety experienced by the control group could have also had a debilitating effect on their writing performance (Alpert & Haber, 1960), which was found to be inferior to that of the experimental group. Consequently, the control group may have allocated more cognitive resources to anxiety related to the writing task rather than to the requirements of the task itself (Dewaele & MacIntyre, 2014; Tsao, Tseng, & Wang, 2017).

It may be counterintuitive that unfocused WCF decreases anxiety because learners receive many comments. However, there can be a few factors that helped alleviate learners' anxiety in this particular study. First, it is possible that, although the present study provided unfocused WCF, the absolute number of comments was not substantial enough for learners to feel anxious (Table 1). Second, the present study provided positive wording comments to the experimental group, which is different from other WCF studies (e.g., Kepner, 1991; Truscott, 1996, 2007). Third, the present study did not require learners to revise. Perhaps, unfocused WCF is more likely to increase learners' anxiety when learners are required to deal with those comments.

4. Conclusion

A sizable body of literature advocates applying WCF in teaching foreign languages. WCF appears effective in triggering learners' success by informing learners about their writing weaknesses which may boost their self-efficacy. Gass (2003) and Leki (2006) believe that students can certainly benefit from feedback in their learning as it helps them understand the difference between what is intended to be learned and what they have learned. In contrast, Truscott (1996) advises against utilizing WCF arguing that it overlooks the major SLA acquisition insights and that there are practical problems on how teachers provide WCF. Nevertheless, the advantages of

WCF outweighs its disadvantage, particularly in EFL contexts where learners may have limited access to sources of knowledge beyond their teachers. Therefore, the study recommends that teachers utilize WCF in EFL milieus to actively engage learners in their learning process. This line of reasoning is supported by some studies including Bitchener (2008), Cheng and Zhang (2021 a, b), and Hyland and Hyland (2019).

Investigating the impact of WCF, the current study demonstrated that EFL students can enhance their writing skill, writing self-efficacy and overcome their writing anxiety. As teaching writing is an integral part of language instruction, it is highly recommended that teachers take steps to enhance their students' writing self-efficacy. This can be achieved by involving students in writing tasks and providing them with WCF. To further motivate students, they should be encouraged to set higher goals (Zimmerman & Bandura, 1994) and put in more effort towards their writing endeavors (Pajaras, 2003). One effective way to accomplish this is by creating a positive and friendly atmosphere in the classroom where students can ask questions and receive feedback following the provision of WCF. This approach encourages learners to build on the range of correct answers presented, thereby boosting their self-efficacy and directing their attention towards accomplishing more challenging writing tasks in the future.

Additionally, it is recommended that teachers assign writing topics that are within the competence and interest of their students, as learners are likely to experience a sense of inefficacy when faced with overly difficult writing tasks. By assigning safe topics, teachers can help students develop their writing skills more effectively and build their self-confidence over time.

Finally, to achieve the aims of WCF, teachers need to cultivate a relaxed and stress-free atmosphere that incorporates interesting teaching approaches. Teachers play an indisputable role in their students' anxiety alleviation, and by helping students overcome their feelings of anxiety, teachers can facilitate their development as better language learners (Young, 1999).

The findings of the current study should be cautiously taken together with its limitations. First, the sample size was relatively small, with only 52 participants. Second, the study focused solely on intermediate level students who were exclusively male, with the age range limited to 12-18 years. As a result, generalizing the study's findings to other contexts may be implausible. Therefore, further research on applying WCF is called for to be carried out in different contexts with larger and more diverse samples with different genders, so that our understanding can be deepened on its effective role in writing pedagogy. Finally, because the study just addressed the affective constructs of self-efficacy and anxiety, researchers can explore other factors such as motivation, willingness to take part in broader range of writing activities, and EFL learners' attitudes towards receiving WCF.

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