Unfocused Written Corrective Feedback and L2 Learners' Writing Accuracy: Relationship Between Feedback Type and Learner Belief

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ABSTRACT

Background: Feedback provided to learners' writing is a construct of identifying a learner's performance, and it can be identified and trifurcated as grammatical form, location in the text, and pragmatic functions. Second language researchers worldwide consider written corrective feedback (WCF) as a vital and valuable teaching tool that enables learners to improve accuracy in L2 writing.

Purpose: In this context, there exists a plethora of studies that examine the efficacy of WCF on L2 learners' writing accuracy. However, literature is replete with research that looks into the effectiveness of unfocused WCF on L2 learners' writing accuracy especially concerning learners' belief of the feedback type. Not much research is available demonstrating unfocused WCF's efficacy on L2 learners' writing accuracy.

Methods: Using a quasi-experimental design, three intact classes were recruited and were randomly placed into two experimental groups: indirect corrective feedback, direct corrective feedback, and one control group. The participants completed three narrative writings, one each at pre-test, post-test, and delayed post-test.

Results: The results of the study unveiled that the WCF enabled the treatment group learners to produce text with fewer errors than the control group participants. The study also reported no relationship between the learners' beliefs and the efficacy of WCF, meaning that the preference of learners for a particular type of feedback did not influence the efficacy of WCF.

Conclusion: Based on the results of the case study, important pedagogical implications for ESL/EFL instructors are provided

KEYWORDS

written corrective feedback, learners' beliefs, L2 writing, unfocused written corrective feedback

INTRODUCTION

The field of written corrective feedback (WCF) has garnered considerable attention from research scholars globally (Lee et al., 2021). Overwhelming research evidence is available demonstrating the efficacy of WCF (see Kang & Han, 2015), thereby refuting Truscott's (1996) claim that WCF wastes teachers' time and energy and is ineffective in assisting learners in overcoming their errors. There-fore, L2 teachers should provide WCF to their learners. Although a great strand of research has shown support for the efficacy of WCF in general, thus questioning Truscott's (1996) argument. The findings obtained from these studies have also unveiled that the efficacy of WCF can be moderated by a number of variables, such as feedback type and learners' perception of the feedback they receive (Rummel & Bitchener, 2015; Hyland & Hyland, 2019; Suzuki et al., 2019; Zabihi

& Erfanitabar, 2021; Mujtaba et al., 2022). While the previous body of research has compared the effects of different forms of feedback, such as direct versus indirect corrective feedback (Bitchener & Knoch, 2010; Bitchener et al., 2005; Al Harrasi, 2019; Guo & Barrot, 2019), the mode of feedback in these studies was 'focused', that is, these studies provided feedback on the selected number of errors. Karim and Nassaji (2018) argue that providing focused WCF is not the reflection of a real classroom setting where L2 teachers usually provide WCF on a wide range of errors. They also argue that focused WCF studies are not ecologically valid. However, most of the WCF studies are dominated by focused feedback (Karim & Nassaji, 2018; Sinha & Nassaji, 2021). Therefore, one of the goals of the current study is to provide unfocused WCF on L2 learners' writing errors, thus increasing the ecological validity of the study and bringing more empirical evidence demonstrating the efficacy of unfocused WCF. Another variable that can moderate the efficacy of WCF is L2 learners' beliefs about WCF (Rummel & Bitchener, 2015; Sinha & Nassaji, 2021). While a number of studies (Ghazal et al., 2014; Diab, 2015; Chen et al., 2016) have examined L2 teachers' and learners' beliefs and preferences of different types of WCF and reported that both L2 teachers and learners favor WCF, not much research evidence is available tracing the relation between L2 learners' beliefs and the efficacy of WCF (Sinha & Nassaji, 2021). Investigating the relationship between learners' perception and WCF types merits attention because the previous body of research has demonstrated that different modes of instruction seem to benefit L2 learners differently (Slack & Norwich, 2007; Tight, 2010; Thomson et al., 2015). The current study was therefore conducted to fill two gaps: first investigating the efficacy of unfocused WCF on L2 learners' writing accuracy; second, investigating if there exists any relation between WCF types and L2 learners' beliefs.

LITERATURE REVIEW

Writing Accuracy and Written Corrective Feedback

WCF plays an important role in helping learners improve their writing accuracy. An accurate understanding of the processing of WCF has been explained in the cognitive processing of WCF (Bitchener, 2016). WCF is an input that points out the erroneous output of the learners. The input provided in the form of WCF may raise the level of learners' attention (Bitchener & Storch, 2016). Therefore, there is a possibility that learners respond to and process WCF, and subsequently modify their erroneous output (Bitchener & Storch, 2016). If learners are unable to modify their erroneous output, another episode of WCF may start. In this manner, WCF is expected to help learners improve their accuracy in writing (Bitchener & Storch, 2016). A great strand of research has tested the theoretical claims and demonstrated the efficacy

of WCF on L2 writing (Mujtaba et al., 2021). The earlier studies on WCF reported their efficacy in revised writing (Robb et al., 1986; Fathman & Whalley, 1990; Ashwell, 2000; Truscott & Hsu, 2008). However, these studies were met with criticism because Truscott (1996,2007) argues that exhibiting accuracy in revised writings is not a testimony that accuracy will be maintained in new writings. Thus, to counter this criticism, studies started examining the efficacy of WCF on new writing drafts (Sheen, 2007; Bitchener & Knoch, 2009; Guo & Barrot, 2019; Ekiert & di Gennaro, 2019; Mujtaba et al., 2019; Suzuki et al., 2019). While these studies have shown the efficacy of WCF, the mode of WCF in these studies was focused. Focused WCF is when teachers provide feedback on a limited number of errors (Ellis et al., 2009). For instance, in a text, the teachers decide to provide feedback on English article errors only, while not providing feedback on the other types of errors. For instance, the participants in Ekiert and di Gennaro (2019) received WCF only on English articles. Likewise, Suzuki et al. (2019) provided WCF only on English articles and past perfect tense. Focused WCF is believed to be more effective than unfocused WCF, in which teachers provide WCF on all the errors made by the learners (Karim & Nassaji, 2018), because the former does not overburden the learners' attentional capacity and allows them to study and respond to the WCF more effectively (Sheen, 2007; Ellis, 2008; Bitchener & Storch, 2016; Lee, 2019). Karim and Nassaji (2018) argue that focused WCF may seem to be more effective than unfocused WCF, however, the findings of such studies are not ecologically valid (Ferris, 2010) as language teachers usually provide WCF on a wide range of errors. In this regard, Storch (2010) asserts that providing unfocused WCF is a real reflection of a classroom setting, thus findings obtain from unfocused WCF studies have a direct practical implication for L2 teachers.

Since unfocused WCF is a reflection of a real classroom setting, L2 scholars have started examining the effects of unfocused WCF on L2 learners' writing accuracy (Van Beuningen et al., 2008;2012; Frear & Chiu, 2015; Karim & Nassaji, 2018). However, the findings obtained from these studies are mixed. For instance, Van Beuningen et al. (2008) investigated whether the provision of unfocused WCF helps learners improve their writing accuracy in revised writing and new writing. The study had two groups: direct feedback and indirect feedback. The findings unveiled that both WCF groups enabled the learners to improve their accuracy in writing in the short run, while in the long run, the indirect corrective feedback (ICF) group did not retain its accuracy in writing. Contrary to the findings of Van Beuningen et al. (2008), Frear and Chiu (2015) conducted a study to investigate the effects of focused and unfocused WCF. The results of the study concluded that both types of WCF helped learners improve their accuracy in writing on post-test and delayed post-test. More recently, Karim and Nassaji (2018) conducted a study to investigate the effects of unfocused WCF on L2 learners' revised writing and new writing. The study had two types of unfocused WCF: indirect and direct. The findings of the

study confirmed that both types of WCF helped learners improve their accuracy in the short run. However, the effects of WCF diluted in the long run on a new draft. Although the aforementioned studies unveiled the efficacy of unfocused WCF, the results obtained from these studies are mixed (see Karim & Nassaji, 2019). The mixed findings obtained from these studies could be attributed to the complexity of the feedback (Nassaji, 2015; Chen & Nassaji, 2018). Therefore, L2 scholars are now not only interested in investigating the efficacy of WCF but are also interested in unearthing the factors that influence the effectiveness of WCF (Suzuki et al., 2019; Sinha & Nassaji, 2021).

Direct and Indirect Feedback

Many recent L2 scholars have started to investigate not only the general efficacy of WCF but also if its effects differ across different types of WCF (Karim & Nassaji, 2019). In this regard, WCF studies have mainly focused on direct corrective feedback (DCF) and indirect corrective feedback (ICF) (Ferris & Robert, 2001; Ferris, 2002, 2006). DCF is when teachers provide the correct form of the erroneous output made by the learners (Ellis, 2008), and this correction is commonly provided by crossing or underlining the erroneous output and providing the correct form. In contrast, ICF is when teachers do not provide the correct form, rather they underline or circle the erroneous output of the learners (Ellis, 2008). While L2 scholars seem to advocate in favor of WCF, there is a conundrum among research scholars as to which type of WCF is most effective (Nassaji, 2016; Guo & Barrot, 2019). For instance, some researchers put their argument in favor of DCF because they believe this type of WCF is less confusing for the learners as it provides the correct form of the erroneous output (Bitchener et al., 2005; Sheen, 2007; Shintani et al., 2014). In contrast, other research scholars argue that ICF works better as it engages learners in autonomous learning and encourages them to be independent in their learning (Ferris, 2003, 2006).

Despite the disagreement among the scholars over which type of WCF is superior, other scholars assert that the question of which type of WCF is superior is not relevant, as each type of WCF contributes to language learning differently, therefore, the use of WCF should not be taken as a matter of superiority rather than suitability (Al-Rubai'ey & Nassaji 2013; Chen et al., 2016). Studies investigating the differential effects of types of WCF have reported mixed results. For instance, Ferris and Roberts (2001) found both DCF and ICF equally effective in promoting language learning. Accumulating similar research evidence, Bitchener and Knoch (2010) reported no significant difference between more explicit types of WCF (DCF and DCF+ written and oral metalinguistic explanation (ME) and less explicit types of WCF (underlining). Ellis et al. (2006) explain the distinction between explicit and implicit types of WCF. They explain that in the case of implicit feedback there is no overt indication that an error has been made, whereas in explicit type there

is. Based on this rationale, DCF give is more explicit than ICF (Nassaji, 2016). Contrary to the findings of these studies, Sherpa (2021) reported the superiority of ICF over DCF. Similarly, Nematzadeh & Siashpoosh (2017) investigating the effects of DCF and ICF, reported the effectiveness of both types of WCF. However, the ICF group exhibited higher accuracy. While these studies demonstrated the superiority of ICF over DCF, other scholars reported the superiority of DCF over ICF (Bitchener et al., 2005; Guo & Barrot, 2019; Zabihi & Erfanitabar, 2021). Bitchener et al. (2005) investigated the differential effects of different types of WCF: DCF; DCF+ ME; DCF+ written and oral ME. The study found that DCF +written and oral ME group exhibited higher accuracy than the DCF group alone. Reflecting similar findings, Zabihi and Erfanitabar (2021) conducted a study to examine the effect of DCF, DCF+ME, ICF+ME, and ICF. The study reported the supremacy of DCF+ME over ICF+ME and ICF groups. Taken together the findings of the aforementioned studies, it seems plausible to infer that there seems no certain answer as to which type of WCF is most effective. Indeed, Kang and Han (2015) in their meta-analysis rightly argued that research scholars have yet to decide which type of WCF (DCF and ICF) is superior.

Feedback Type and Beliefs of Learners

Learner beliefs have a pivotal role in second language learning (Rummel & Bitchener, 2015). Wenden (1999) defines learner beliefs as what learners think about learning. Dörnyei (2005) and Barcelos (2003) assert that learner beliefs shape L2 learning. A great strand of WCF research has examined the teachers' and learners' beliefs about WCF and unveiled that both teachers and learners prefer feedback in general (Leki, 1991; Hedgcock & Lefkowitz, 1994; Chen et al., 2016). However, Bitchener and Rummel (2015) argue that different types of WCF and learners' proficiency levels may influence the preference of L2 learners for WCF. For instance, Lee (2008) reported that WCF was preferred more by higher-proficiency learners than those of lower proficiency. Seker and Dincer (2014) concluded that learners believe feedback to be beneficial for their improvement in writing accuracy. Similarly, Chen et al. (2016) examined the EFL learners' perception of grammar instruction and feedback. Their study reported that learners greatly value feedback. Amrhein and Nassaji (2010) examined the learners' and teachers' views about the efficacy of WCF. The study reported that both teachers and learners believe WCF to be essential in L2 classes. However, the study also reported some discrepancies in the opinions of the teachers and learners. For instance, the majority of the students preferred unfocused WCF, while nearly half of the teachers employed focused WCF.

While the aforementioned studies demonstrated the general preference of L2 learners and teachers for WCF, there is a paucity of studies that have unearthed the extent to which L2 learners' preferences shape the efficacy of WCF (Sinha &

Nassaji, 2021). In this regard, a few studies have indirectly examined how learner beliefs can influence the working of WCF (Swain & Lapkin, 2002; Storch & Wigglesworth, 2010; Mahfoodh & Pandian, 2011). For instance, Swain and Lapkin (2002) found indirect evidence of how learner beliefs influence WCF. They had their learners work collaboratively to produce a text in a jigsaw activity. The study unveiled that L2 learners when provided with the reformulations of their errors, they accepted the reformulations, and sometimes they refused them. The reason for refusal was attributed to the learner's beliefs that contradicted the reformulations provided to them. Accumulating similar research evidence, Mahfoodh and Pandian (2011) demonstrated that one of the learners refused the reformulation provided by the teacher because it modified the meaning of the sentence the learner had intended to express. Similarly, Storch and Wigglesworth (2010) reported that learners were unlikely to accept the WCF if it was against their preferences and beliefs. In a few rare studies, Rummel and Bitchener (2015) directly examined the relationship between learner beliefs and WCF. To this end, they unearthed the learners' beliefs about WCF at the outset of the study and later assigned them to one control and three treatment group: DCF, ICF, and ME. These learners were then provided with the WCF types they preferred, while the others were not given the preferred WCF type. The results unveiled that learners benefitted the most from WCF when they received the feedback type they preferred. More recently, Mujtaba et al. (2022) conducted a study to examine the differential effectiveness of audio-based and text-based computed mediated feedback types and whether there was any relationship between the feedback types and the learners' preferences. The study unveiled that learners who received the feedback type they preferred exhibited higher accuracy in the text-reconstruction writing tests than those who did not receive the feedback type they preferred. While the authors demonstrated that learner beliefs influence the effectiveness of the WCF type, the findings of the study may not hold valid for written corrective feedback because the mode of feedback in the current study is written. Sheen (2010) also substantiates this statement by stating that the mode of feedback may influence the effectiveness of WCF.

Taken together the findings of the aforementioned studies, it seems clear that there is a dearth of studies examining the efficacy of unfocused WCF on L2 learners' writing. It also becomes clear that a limited number of studies have directly examined the relationship between learner beliefs and WCF types. Based on these gaps in the literature, the current study intends to answer the following questions:

1. How effective are direct and indirect unfocused WCF types in helping ESL learners improve accuracy in writing?

2. What are the preferences and beliefs of ESL learners regarding WCF in general and the types of feedback?

3. Is there any relationship between WCF types and learner belief? If yes, do the learners who receive their preferred WCF types produce more accurate written texts than those who do not receive their preferred WCF types?

METHODOLOGY

Participants

The current study recruited three intact classes of Functional English totaling 119 first-semester undergraduate students (see Table 1 for demographics). Functional English is a mandatory course that focuses on L2 learners' grammar and writing accuracy. The learners in this course are expected to learn and produce different writings, including, process, narrative, and picture descriptions. These learners were administered the Oxford Placement Test (OPT) before the commencement of the study to ensure they are homogenous in terms of language proficiency. The OPT has 60 items that measure the grammar and vocabulary of test takers. The result of the OPT demonstrated no significant difference among the groups (p=.699). After eliminating the participants who could not participate during the complete study, data from 105 participants from three classes remained. These intact classes were then randomly allocated to a control group (n=35) and two treatment groups: DCF (n=37) and ICF (n=33).

Data Collection Instrument

The data for the current study was conducted employing questionnaires and writing tasks. The subsequent sections explain these instruments in detail.

Questionnaire

Since one of the purposes of the research was to unearth learner beliefs about WCF and to see how these beliefs affect the efficacy of WCF, the current study adapted a questionnaire from Chen et al. (2016) (see Appendix A). The questionnaire was initially designed by Amrhein and Nassaji

Table 1

Demographics of the Participants

	Total	Male	Female	Age (average)	Proficiency	Education
Participants	105	49	56	20	B 1	Undergraduate

(2010) after extensive reviewing and a pilot study. The questionnaire contains closed-ended and open-ended questions regarding learners' beliefs about WCF, and which type of WCF they prefer (see Chen et al., 2016). The responses to the open-ended questionnaire were analyzed qualitatively, while the close-ended questions were analyzed quantitatively. The participants had to record their responses on a Likert scale or multiple choice formats. The questionnaire was pilot studied to estimate the time needed to complete and to ensure that the language used in the questionnaire was properly understood by the participants. The questionnaire has been used in previous studies (Amrhein & Nassaji, 2010; Chen et al., 2016; Sinha & Nassaji, 2021), and it also yielded an acceptable alpha value for the present study (.858)

Writing Tasks

Since the aim of the study was to assess the efficacy of unfocused WCF on L2 learners' writing accuracy, picture description narrative writing was chosen. The use of picture description narrative writing allows learners to write naturally (Rummel & Bitchener, 2015), and the researchers expect a wide variety of errors related to past tenses, prepositions, articles, passive voice, and subject-verb agreement, etc. Secondly, narrative writing is a part of the Functional English course, thereby asking learners to write a narrative text would make the findings of the study ecologically valid. After consulting the course teachers involved in the current study, three picture description narrative writings were adopted from Heaton's (1975) Beginning Composition Through Pictures. Several WCF studies have adopted picture description narrative writings from Heaton's Beginning Composition Through Pictures (Khezrlou, 2019; Zhang, 2021). Each picture description narrative writing task had six pictures displayed sequentially, and the participants were instructed to write about the story shown in the picture in between 120-150 words in 25 minutes. The first writing task was titled **Waiting for a bus**. The pictures depicted the story of three small boys and how they could not get a place on the first bus. The boys finally got a place on the second bus and later found that the first bus got broken. The second writing task was titled **A surprise.** The pictures depicted the story of a man with a suitcase waiting at the airport, and how his suitcase was stolen. The third writing task was titled **The chase.** The pictures depicted the story of a boy who lost his parcel on the way and how he was chased by a stranger.

Procedure of Data Collection

Before the commencement of the data collection, the first author discussed the purpose of the study with the course teachers. The researchers recruited two teachers: one for the control group and the other for the treatment group. The first author discussed the data collection procedure of the study and the scoring criteria of the writing tasks with the teachers and clarification was provided by the first au-

thor where required. The data collection commenced halfway through the semester ensuring that all the participants had received instruction on paragraph writing. The teachers explained how paragraphs are written and that past tenses are usually used while describing narrative picture description writing. The teachers did not teach grammar explicitly nor any feedback on grammar errors was provided. In week 1 of the study, the teachers administered the OPT to ensure the participants of the study were similar in terms of language proficiency. The first picture description narrative writing was administered across the three classes in week 2. The participants were asked to write 120-150 words in 25 minutes (based on the findings from the pilot study). This writing was taken as a pre-test as it was administered before the learners received unfocused WCF on their writing. The teachers had one-week time to check the writings and provide unfocused WCF on the errors. The control group teacher only scored the writing, and no feedback was provided. In week 3, the teachers distributed the written drafts of the learners (from week 2). Consistent with other WCF studies (Shintani et al., 2014; Reynolds & Kao, 2019; Suzuki et al., 2019; Zhang, 2021), the treatment group participants were given 5 minutes to review the feedback provided on their writings, while the participants in the control group were asked to read their work and look for possible errors themselves, as done in previous WCF studies (Sheen, 2007; Rummel & Bitchener, 2015). During this time, the teachers did not provide any comments on the errors, nor the learners were asked to revise their texts. After the lapse of 5 minutes, the teachers collected the written drafts from the participants. The second picture description narrative writing was administered across the three classes in week 4. This writing was taken as a post-test as it was administered after the learners have received the WCF treatment session. The participants were given 25 minutes to write between 120-150 words. The teachers did not return the second picture description writing task to the participants. The teachers had a week time to score the writings. The delayed post-test was administered in week 7 in which the learners had to write a picture description narrative writing 3. This writing was taken as a delayed post-test since it assessed the retention of the WCF by the treatment group participants. The teachers did not return the second picture description writing task to the participants. Post completing the delayed post-test, the teachers administered the questionnaire to the two treatment groups. The data collection procedure is schematized in Figure 1.

Operationalization of Unfocused WCF

The current study had two treatment groups: direct corrective feedback (DCF) and indirect corrective group (ICF). Since the aim of the study was to examine the efficacy of unfocused WCF on L2 learners' writing accuracy, the current study provided WCF on all the errors made by the learners, as done in the previous WCF studies (Van Beuningen et al., 2012; Karim & Nassaji, 2018).

Figure 1

Schematization of the data collection procedure

Treatment Groups		Control group (N=35)
DCF Group (N=37)	ICF Group (N=33)	
Week 1 Briefing about the research and administration of Oxford Placement Test		Same as treatment groups
Week 2 Pre-test (writing task1)		Same as treatment groups
Week 3 Studying of WCF on writing task 1		No WCF
Week 4 Post-test (writing task)		Same as treatment groups
Week 7 Delayed- post-test (writing task) +questionnaire		Same as treatment groups (No questionnaire)

Direct Corrective Feedback Group

The learners in the DCF group received direct correction of their errors by their teacher. The teacher crossed the erroneous part and provided the correct form. For instance, see sentence (1)

> The ~~childrens~~ were ~~waited~~ for the school bus.
>   children   waiting

Indirect Corrective Feedback Group

The learners in the ICF group did not receive a corrected form of their erroneous output, rather the errors were underlined only. For instance, see sentence (2)

> When the bus <u>was arrived,</u> it was full <u>by</u> people.

Scoring of the Written Drafts

The written drafts at three testing times of both treatment groups and the control group were scored by their respective teachers. Following previous WCF studies (Chandler, 2003; Karim & Nassaji, 2018; Author et al., 2021), we employed an error ratio metric to capture the writing accuracy of the participants. The metric of error ratio would also enable the researchers to account for the differences in text length of each participant. The error ratio was computed by counting the total number of errors made by a participant divided by the total number of words written multiplied by 100. All the writings were scored again by the fourth author to ensure the reliability of the scoring. The inter-rater reliability between the two raters for all three writings was found to be good and acceptable for both treatment groups and the control group. For treatment group, DCF, pre-test (ICC= .811, 95% CI=.633, .903), post-test (ICC=.943, 95% CI= .890, .971), delayed post-test (ICC= .888, 95% CI= .783, .942). Similarly, for ICF: pre-test (ICC=.834, 95% CI= .665, .918). The inter-rater reliability was good and acceptable for the control group for all three writings: pre-test (ICC=.836, 95% CI, .676, .917), post-test (ICC=.824, 95% CI, .652, .911), and delayed post-test (ICC=.802, 95% CI, .609, .900).

DATA ANALYSIS

RQ1 How effective are direct and indirect WCF types in helping ESL learners improve writing accuracy?

To answer RQ1, we analyzed the written drafts of the participants produced at pre-test, post-test, and delayed post-

Table 2

Descriptive statistics of error rates across three testing times

Groups	N	Pre-test		Post-test		Delayed post-test	
		M	**SD**	**M**	**SD**	**M**	**SD**
DCF	37	18.7	2.1	14.9	3.0	13.8	2.4
ICF	33	20.0	2.4	16.9	2.3	15.5	2.6
Control	35	19.9	2.2	18.5	2.3	18.2	1.8

M= mean of error rat

test. We first calculated the descriptive statistics of the error rates of three writings produced by both treatment and control groups (see Table 2).

We then applied a one-way on the pre-test error rates of the three groups. To test whether the mean values reported in Table 2 are significantly different from the control group, we applied one-way ANOVA to answer RQ1. Before applying the ANOVA test, the assumptions of the ANOVA test were checked. The examination of the data at the pre-test indicated the assumption of the normality was met for the three groups: DCF (Shapiro- Wilk, p= .290); ICF (Shapiro-Wilk, p= .90), and control group (Shapiro-Wilk, p=.209). The data at the pre-test also met the condition of Homogeneity of Variance (Leven's test=.904). The result of the one-way ANOVA reported no significant difference among the three groups at the outset of the study [$F_{(2,102)}$ = 2.98, p=.55], indicating that all the groups were homogenous in terms of writing accuracy. After ensuring homogeneity among the groups at the pre-test, we analyzed the post-test and delayed post-test error rate scores of the three groups. The assumption of the normality and homogeneity of variance were met at both post-test and the delayed post-test. One-way ANOVA reported a significant difference among the three groups for post-test [$F_{(2,102)}$ = 17.4, p=.000]. Similarly, one-way ANOVA reported a significant difference among the three groups at the delayed post-test [$F_{(2,102)}$ = 31.7, p= .000]. We then applied a post hoc multiple comparison test to iso-

late the group differences at the post-test and delayed post-test. The multiple post hoc comparison test unveils that both treatment groups significantly outperform the control group at the post-test and delayed post-test (see Table 3).

RQ2 What are the preferences and beliefs of ESL learners regarding WCF in general and the types of feedback?

To answer RQ2, we analyzed the questionnaire to unearth the two treatment group participants' beliefs about learning grammar and receiving feedback from teachers. The participants of the groups were also asked to give their preference on the different types of WCF– DCF or ICF. The questionnaire was analyzed by calculating the percentages and frequencies of responses to each item. The first question asked whether grammar is useful for improving writing. Table 4 presents the participants' responses to this question. From Table 4, it becomes evident that the majority of the participants 59 out of 70 view grammar as very useful for improving writing accuracy.

The next question was designed to elicit the participant's beliefs about the significance of WCF in general. The result of the questionnaire unveiled that the majority of the participants 61 out of 70 believe WCF to be very useful, while 6 out of 70 indicated WCF to be somewhat useful (see Table 5).

Table 3

Comparison of treatment and control group at post-test and delayed post-test

Group Contrast	Post-test		Delayed Post-test	
	Cohen d	P-value	Cohen d	P-value
DCF vs. Control	2.3	.005*	2.0	.007*
ICF vs. Control	0.6	.003*	1.2	.000*
DCF vs. ICF	0.7	.005*	0.8	.007*

Table 4

Frequencies of participants' responses to Q 1: grammar and writing

	Options				
	Very useful	Somewhat useful	Not Very useful	Not useful at all	Total
N	59	09	02	0	70
% of Response	84	13	03	0	100

Table 5

Frequencies of participants' responses to Q2: WCF and grammar

	Options				
	Very useful	Somewhat useful	Not Very useful	Not useful at all	Total
N	61	6	3	0	70
% of Response	87	09	04	0	100

The third question was meant to ascertain the learners' beliefs about the amount of WCF they prefer receiving from their teachers. Table 6 reports that the majority of the participants, 66 out of 70, responded in favor of receiving WCF on all the errors in their writing. Not a single participant indicated that they do not want their teachers to correct any errors in their writing. From Table 6, it becomes evident that the participants prefer unfocused WCF.

The fourth question was designed to elicit the participants' responses pertaining to the effectiveness of DCF and ICF feedback types, irrespective of the type of feedback that they received. The analysis of the fourth question demonstrated that the majority of the participants rated DCF as very useful (see Table 7). From Table 7, it becomes clear that a great majority of the participants (83%) valued DCF to be very useful. In contrast, 38 % valued ICF to be very useful. The analysis of the participants' responses further unearthed that those who voiced DCF to be very useful were of the view that this type of feedback does not create any confusion. In contrast,

the participants who voice ICF to be very useful reported that this type of feedback (ICF) is enough. The participants said that they can reach the correct form of the error if the error is underlined.

The fifth question was meant to gauge the efficacy of the WCF the participants received in their respective groups. Table 8 presents the opinion of the learners pertaining to the type of feedback they received in their respective groups. In the DCF group, 70 % of the participants regarded DCF to be very useful, while 11 % of the participants regarded DCF as not very useful. Similarly, in the ICF group, 18 % of the participants regarded ICF to be very useful, while the majority of the participants (58%) reported ICF to be somewhat useful. To sum up, the majority of the respondents voiced in favor of DCF citing reasons that this type of feedback is less confusing. Likewise, the participants who voice in favor of ICF cited reasons that this type of feedback is sufficient and ICF also allows us (the learners) to not become dependent on the teachers every time for error corrections.

Table 6
Frequencies of participants' responses to Q 3: WCF on all errors

	Options				
	Correct all errors	**Correct major errors, but not the minor ones**	**Correct errors that interfere with the message**	**Should not correct any error**	**Total**
N	66	4	0	0	70
% of Response	94	6	0	0	100

Table 7
Frequencies of participants' responses to Q4: DCF vs. ICF

	DCF		**ICF**	
Options	N	%	N	%
Very useful	58	83	27	38
Somewhat useful	7	10	18	26
Not very useful	3	4	14	20
Not useful at all	2	3	11	16
Total	**70**	**100**	**70**	**100**

Table 8
Frequencies of participants' responses to Q5. Efficacy of the type of WCF received

	DCF		**ICF**	
Options	N	%	N	%
Very useful	26	70	06	18
Somewhat useful	7	19	19	58
Not very useful	4	11	08	24
Not useful at all	0	00	0	00
Total	**37**	**100**	**33**	**100**

RQ3 Is there any relationship between L2 learners' writing accuracy and learner beliefs and preferences? If yes, do the learners who receive their preferred WCF types produce more accurate written texts than those who do not receive their preferred WCF types?

To answer RQ3, we first analyzed the questionnaire and calculated the frequencies of responses indicating the preferences of learners for direct and indirect types of feedback. We then applied Pearson Correlation to ascertain whether there is any significant relationship between learners' overall perception of WCF preferred feedback type and their writing accuracy measured in terms of error rate at both post-test and delayed post-test. We applied the Pearson correlation based on the responses accrued from question 5 of the questionnaire (see Table 8). The result of the Pearson Correlation unveiled no significant correlation between the learners' preferred feedback type and error rate at post-test (r=-.016, p=.898). Similarly, no significant correlation was found between the learners' preferred feedback type and error rate at delayed post-test (r=-.110, p=.364). After ascertaining the correlation between the preferred feedback types and error rate, we then divided the learners into two groups: 1) those who preferred DCF and those who preferred ICF. We then applied independent samples t-test to ascertain if there is any significant difference between the two groups favoring different types of WCF. The result unveiled no significant difference between the two groups at post-test (t=-1.83, p=.072, df=68) and delayed post-test (t=-1.55, p=.125, df=68). This indicates that the learners' prefer-ence does not influence the efficacy of WCF reflected in the writing accuracy of the learners at the post-test and delayed post-test. However, this provides an incomplete picture as we do not know whether the learners who received the feedback they preferred outperformed those who did not receive the feedback they preferred. To achieve this, we made two subgroups, meaning each group (DCF and ICF) is divided into two groups: those who received the feedback they preferred and those who did not receive the feedback they preferred (see Tables 9 and 10). Since the group size shrank to less than 30, we applied a non-parametric Mann-Whitney U test. The result of the Mann-Whitney U test reported no significant difference between the two subgroups of DCF at the post-test (U=78.5, p=.312) and delayed post-test (U=72.0, p=.213). Similarly, no significant difference between the two subgroups of ICF was found: post-test (U=109.5, p=.345) and delayed post-test (U=99, p=.191). This indicates that even the learners who received their preferred feedback type did not perform significantly different from those who did not receive their preferred feedback type.

DISCUSSION

The current research was conducted to examine the effects of two forms of unfocused WCF: direct and indirect on ESL learners' writing. The research also explored the relationship between the efficacy of WCF and learner beliefs and whether the learner beliefs and preferences for a particular type of WCF have any influence on the writing accuracy of the learners measured in terms of error rate. The RQ1 of the study sought to answer how effective direct and indi-

Table 9

Descriptive statistics of error rate for preferred and not preferred sub-sets of DCF and ICF at post-test

	DCF (error rate), N=37		ICF (n=33)	
	Not preferred DCF	**Preferred DCF**	**Preferred ICF**	**Not preferred ICF**
N	4	33	25	8
Mean	15.5	14.8	16.6	17.3
Median	16	14.5	17	17
SD	2.1	3.2	2.5	2.1

Table 10

Descriptive statistics of error rate for preferred and not preferred sub-sets of DCF and ICF at Delayed test

	DCF (n=37)		ICF (n=33)	
	Not preferred DCF	**Preferred DCF**	**Preferred ICF**	**Not preferred ICF**
N	4	33	25	8
Mean	15	13.7	14.8	16.4
Median	15	13.5	15	15.2
SD	2.2	2.4	2	3.1

rect WCF types are in assisting ESL learners to produce texts with fewer errors. We computed the error rate of the number of errors made by the participants at three testing times. The results of one- ANOVA unveiled that both types of WCF significantly performed better than the control group at post-test and delayed post-test. This aligns with the findings of the previous WCF studies that demonstrated that WCF helped learners improve their writing accuracy (Bitchener et al., 2005; Karim & Nassaji, 2018; Rahimi, 2019; Author et al., 2021). For instance, Karim and Nassaji (2018) conducted a study examining the differential effects of unfocused WCF types on L2 learners' writing accuracy on revised and new writing drafts. The study demonstrated that unfocused WCF helped learners improve writing accuracy in revised and new drafts. Karim and Nassaji (2018) administered three rounds of WCF treatment sessions while the current study had one round of WCF. The results of the current study are substantiated by Bitchener's (2016) cognitive processing model of WCF which explains how a single episode of WCF can help learners notice their linguistic inaccuracies and thereby improve them in subsequent drafts (see Bitcher, 2016 for cognitive processing of WCF). We also examined the differential effects of DCF and ICF and found that learners who received DCF produced written texts with significantly fewer errors than those who received ICF at both post-test and delayed post-test as reflected by the mean error rate. Moreover, the effect size, represented by Cohen d was higher for the DCF group at post-test (Cohen d= 2.3) and delayed post-test (Cohen d= 2.0) than for the ICF group at post-test (Cohen d= 0.6) and delayed post-test (Cohen d=1.2). This aligns with the previous WCF studies that demonstrated the superiority of DCF over ICF (Chandler, 2003; Van Beuningen et al., 2012; Guo & Barrot, 2019; Author & Author, 2022). One plausible reason for the DCF group to exhibit significantly higher accuracy in writing than the ICF group could be attributed to the learners' proficiency level. The participants in the present study had (B1) intermediate language proficiency based on the score of the OPT. There is a possibility that the learners in the ICF group may have needed more than the underlining of their errors to produce the correct linguistic forms. In contrast, the DCF learners were given the correct forms of their erroneous linguistic output, thereby making it less confusing for them. Bitchener and Ferris (2012) also assert that ICF works effectively for advanced L2 learners as these learners "have a larger linguistic repertoire to draw on" (p.105). While the superiority of the DCF group in helping learners produce more accurate texts aligns with the aforementioned studies, there are a few studies that reported contradictory findings, that is, these studies did not find any significant difference between the DCF and ICF groups. For instance, Sinha and Nassaji (2021) did not find any significant difference between the ICF group and the DCF group in helping learners improve their writing accuracy over time in new writing drafts. One possible reason for such a contradictory finding between the current study and their study could be attributed to the delivery of the ICF. The ICF group in the current study had their errors underlined, while the

ICF group in Sinha and Nassaji (2021) had their errors underlined with metalinguistic clues. This makes the delivery of ICF in Sinha and Nassaji's (2021) study more explicit. This indicates that the degree of explicitness of the feedback influences the efficacy of WCF, as demonstrated in the previous WCF studies (Sheen, 2007; Suzuki et al., 2019; Zabihi & Erfanitabar, 2021; Author & Author, 2022). Similarly, Sherpa (2021) conducted a study to examine the effects of DCF and ICF on the past tense. The study demonstrated that the ICF group produced texts containing fewer past tense errors than the DCF group. One possible reason for such a divergent finding between the current study and Sherpa's (2021) could be attributed to methodological differences. The ICF group in Sherpa (2021) was given grammar notes that they were allowed to read while they produced a new draft, but not the DCF group. In contrast, the errors of the ICF group of the current study were underlined. There is a possibility that the additional grammar rules may have given the advantage to the ICF group over the DCF group in Sherpa's study.

The RQ2 of the study aimed to unveil the learners' beliefs about WCF. The examination of the questionnaire demonstrated that the majority of the participants believed WCF to be an important teaching tool that can aid learners in their writing. These participants also showed their inclination toward unfocused WCF, indicating that it is important for their teachers to mark all the errors in writing. These findings are largely reflected in previous WCF studies (Amrhein & Nassaji, 2010; Mahfoodh & Pandian, 2011; Chen et al., 2016; Sinha & Nassaji, 2021). For instance, the participants in Amrhein and Nassaji (2010) also "thought it most useful for teachers to provide WCF on as many errors as possible" (p.114). In addition to unveiling the preference of L2 learners regarding the usefulness of WCF in classes, the questionnaire was meant to unearth the beliefs of learners for different types of WCF. The analysis of the questionnaire demonstrated that the majority of the participants favored the direct form of feedback correction over the indirect form of feedback. This aligns with the previous WCF studies that explored the preference of learners for the different types of WCF (Lee,2005, 2008; Karim & Nassaji, 2015; Orts & Salazar, 2016). The learners in the current study expressed that the direct form of correction is less confusing as they are provided with the correct answer. This echoes the findings of Karim and Nassaji (2015) where the participants who received DCF voiced "this type of CF was very helpful in correcting the errors because both the errors and their corrections (i.e., target forms) were identified" (p.18). Taken together the results obtained from the questionnaire, it becomes clear that ESL learners value WCF in general and believe that with the provision of teachers' feedback in classes they can improve their understanding of grammar and produce written texts with fewer errors. The majority of the learners also posited that all linguistic inaccuracies in writing should be corrected by the instructors. This statement should be given due consideration by the ESL/EFL teachers as errors that are not treated by the teachers may become fossilized (Selinker, 1972). The learn-

ers of the current study preferred the direct form of error correction over the indirect form of error correction on the pretext that the former type of error correction is less confusing as the correct form of the erroneous linguistic output is provided by the teachers.

The third question of the study was posited to find if there is any correlation between the learners' beliefs and preferences about the WCF types and the efficacy of WCF measured in terms of error ratio at post-test and delayed post-test. The result of the Pearson correlation unveiled no significant correlation between the learners' preferred feedback type and writing accuracy at the post-test and the delayed post-test. Similarly, the result of the independent samples t-test reported no significant difference was found between the groups who favored DCF and ICF, suggesting that preference for WCF does not moderate the efficacy of the feedback. We also applied the Mann-Whitney U test to ascertain whether the learners who received the feedback they preferred performed statistically different than those who did not receive the feedback they preferred. The result of the Mann-Whitney U test unveiled that no significant difference was observed between the groups who received the feedback they preferred with those who did not receive the feedback they preferred, suggesting that the writing accuracy of the learners was not different even if they received the type of feedback they preferred. While these findings resonate with the findings of Sinha and Nassaji (2021), the results contradict the findings of (Swain & Lapkin, 2002; Storch & Wigglesworth, 2010; Rummel & Bitchener, 2015; Author et al., 2022). For instance, Storch and Wigglesworth (2010) reported that the learners while revising the texts used the feedback they preferred to be effective. Similarly, Rummel and Bitchener (2015) demonstrated that the learners who received the feedback they preferred could eliminate more errors in their writing than the ones who did not receive the feedback they preferred. More recently, Author et al. (2022) reported that computer-mediated feedback was more effective when allied with the preferred learning style of the learners. There are possible reasons for such contradictory findings. For instance, the participants in Rummel and Bitchener (2015) and Author et al. (2022) received multiple exposures to the WCF, meaning these participants received WCF more than once on their writings. In contrast, the participants in the current study received WCF only once. There is a possibility that learners in Rummel and Bitchener (2015) and Author et al. (2022) may have become accustomed to their preferred feedback type after getting multiple exposures to the WCF. Another possible reason for not finding any correlation between learners' belief and the efficacy of WCF measured in terms of error rate could be attributed to the fact that the learners may have a wrong belief about the type of WCF they preferred. For instance, the participants have shown their preference for ICF in the questionnaire, but in reality, they may have been interested in receiving DCF. This misalignment has also been shown in previous studies where learners' and teachers' beliefs are

not aligned with their actual practice (Han & Hyland, 2015; Mao & Crosthwaite, 2019). However, this needs to be tested more rigorously in future studies.

CONCLUSION

The current study unveiled that the learners improved their writing accuracy after receiving unfocused WCF. The study reported that both types of WCF: ICF and DCF facilitated the learners in both post-test and delayed post-test. However, the DCF type of WCF was more effective than the ICF. The study also unearthed the learners' beliefs about WCF, grammar learning, and different types of WCF. The analysis of the questionnaire unveiled that the majority of the participants regarded grammar as important for the mastery of writing. These participants also termed WCF as an important pedagogical tool with which they can improve their writing. The examination of the questionnaire also demonstrated that most of the participants preferred receiving unfocused WCF from their teachers. While the analysis of the questionnaire demonstrated the participants' beliefs about WCF, no relation was found between participants' beliefs and the efficacy of WCF measured in terms of error ratio. The learners who received their preferred feedback did not perform significantly different from the ones who did not receive their preferred feedback.

The current study offers some important pedagogical implications for L2 teachers. Firstly, the current study has demonstrated that WCF improved the writing accuracy of the treatment groups. This must encourage L2 teachers to employ unfocused WCF in writing classes to help learners overcome their writing errors. Secondly, the findings demonstrate that both types of WCF helped learners improve their writing accuracy. However, the DCF type of feedback was more effective, therefore, teachers can use these forms of WCF as per their teaching context. For instance, in large classes, teachers often do not find time to provide WCF. In such cases, teachers can use ICF as it can help learners to overcome their errors in writing, and it is also less time-consuming than DCF. Thirdly, albeit the current study did not find any relation between learners' beliefs and the efficacy of WCF, it is still recommended that teachers should not ignore the learners' beliefs about WCF and should consider them before employing the different types of WCF. The current study although providing important pedagogical implications is not without limitations. First, the current study recruited participants from an ESL background. Therefore, future studies should recruit participants from an EFL background to yield more research evidence. Secondly, the current study employed only one treatment session. Future researchers should employ multiple WCF treatment sessions to make the design of the study more ecologically valid. Lastly, future studies may also think of employing think aloud qualitative technique to examine how learners engage with the feedback provided to them.

DECLARATION OF COMPETING INTEREST

None declared.

AUTHOR CONTRIBUTION STATEMENT

Syed Muhammad Mujtaba: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing, Other contribution.

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APPENDIX

Questionnaire

1. How useful is grammar for mastering the writing? Please check one of the following options
   1.   Not useful at all
   2.   Not very useful
   3.   Somewhat useful
   4.   Very useful

2. How useful is WCF in improving writing accuracy? Please check one of the following options
   1.   Not useful at all
   2.   Not very useful
   3.   Somewhat useful
   4.   Very useful

3. If there are many errors in your writing, what do you prefer your instructor to do? Please check one of the following options
   1.   My instructor should correct all errors.
   2.   My instructor should correct major errors but not the minor ones.
   3.   My instructor should only correct errors that interfere with the message.
   4.   My instructor should not correct any error

4. Please indicate your opinion for the degree of usefulness of each of the following technique.
   Please provide a reason of your choice.
   4=Very useful; 3=Somewhat useful; 2=Not very useful; 4= Not useful at all
   a)   Underlining the error without correcting it
           Example: He drive home every day.
   b)   Underlining/Crossing the error and then correcting it
           Example: He drive home every day. (drives)

5. How effective is the feedback type that you received in the current study? Please provide a reason of your choice.
   1.   Not useful at all
   2.   Not very useful
   3.   Somewhat useful
   4.   Very useful