



Received: 23/12/2023

Accepted: 15/02/2024

Published: 31/03/2024

Assessing the Impact of Written Corrective Feedback Strategies on the Writing Proficiency of Senior High School Students

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Rasool, U., Nawaz Abbasi, B., Gao, M., Wang, H., & Hossain, A. (2024). Assessing the Impact of Written Corrective Feedback Strategies on the Writing Proficiency of Senior High School Students. *International Journal of Education & Well-Being*, 2(1), 13-30. <https://doi.org/10.62416/ijwb-18>

Abstract

Written corrective feedback (WCF) in enhancing writing proficiency has been the subject of numerous studies, but few studies have examined students' perceptions about the value of feedback on their written errors. This study aims to investigate the effects of direct WCF, indirect WCF, and metalinguistic explanation on the past simple tense acquisition of senior high school learners in Pakistan. Much research has been conducted involving adults, while little has been done to consider senior high school students in this regard. This study has been aimed to explore the effects of direct WCF, indirect WCF and metalinguistic explanation on the writing performance of senior high school students in Pakistan. Students were divided into four groups, each with one type of feedback, including group four as the control group with no feedback. All four groups had written narration on a given picture and were treated by the mentioned feedback. After that, results were compared to look for effective feedback types. After the writing task, a survey and interview were conducted to explore students' perceptions about WCF and WCF strategies. The study found that learners want feedback from their teachers and prefer direct feedback and Metalinguistic explanation. This research has been planned to help learners in their early stage through WCF learn a second language and form a solid linguistic base to help them construct grammatically correct sentences and compositions.

Keywords: Written corrective feedback, writing performance, feedback types, EFL, student's perceptions

Lise Öğrencilerinin Yazma Yeterlilikleri Üzerinde Yazılı Düzeltici Geri Bildirim Stratejilerinin Etkisinin Değerlendirilmesi

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Öz

Yazılı düzeltici geri bildirim, yazma yeterliliğini artırmada birçok çalışmanın konusu olmuştur, ancak öğrencilerin yazılı hataları üzerine geri bildirim değeri hakkındaki algılarını inceleyen az sayıda çalışma bulunmaktadır. Bu çalışma, Pakistan'daki lise öğrencilerinin geçmiş basit zamanın öğrenimi üzerinde doğrudan yazılı düzeltici geri bildirim, dolaylı yazılı düzeltici geri bildirim ve meta dilbilimsel açıklamasının etkilerini araştırmayı amaçlamaktadır. Yetişkinleri içeren birçok araştırma yapılmışken, bu konuda lise öğrencileri dikkate alınmamıştır. Bu çalışma, Pakistan'daki lise öğrencilerinin yazma performansı üzerinde doğrudan yazılı düzeltici geri bildirim, dolaylı yazılı düzeltici geri bildirim ve meta dilbilimsel açıklamasının etkilerini araştırmayı amaçlamaktadır.

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Öğrenciler dört gruba ayrılmıştır, her biri bir tür geri bildirimle birlikte geri bildirim olmayan kontrol grubu olarak dördüncü grup yer almıştır. Dört grup da belirli bir resim üzerine yazılı anlatım görevi almış ve belirtilen geri bildirimle işlem görmüştür. Sonrasında, etkili geri bildirim türlerini bulmak için sonuçlar karşılaştırılmıştır. Yazma görevinden sonra, öğrencilerin yazılı düzeltici geri bildirim ve yazılı düzeltici geri bildirim stratejileri hakkındaki algılarını keşfetmek için bir anket ve görüşme yapılmıştır. Araştırma, öğrencilerin öğretmenlerinden geri bildirim istediğini ve doğrudan geri bildirim ve meta dilbilimsel açıklamasını tercih ettiğini bulmuştur. Bu araştırma, öğrencilere erken aşamada yazılı düzeltici geri bildirim aracılığıyla ikinci bir dil öğrenmelerine yardımcı olmayı ve onların dilbilgisel olarak doğru cümleler ve kompozisyonlar oluşturmalarına yardımcı olacak sağlam bir dil temeli oluşturmayı amaçlamıştır.

Anahtar Kelimeler: Yazılı Düzeltici Geri Bildirim, Yazma Performansı, Geri Bildirim Türleri, Yabancı Dil Olarak İngilizce, Öğrenci Algıları

Introduction

Corrective feedback, in the second or foreign language learning classroom, refers to different pedagogical strategies, providing feedback in any form written/oral, to assist language learners in developing L2 writing skills (Mao & Lee, 2020; Al Hilali & McKinley, 2021; Barrot, 2021; Cheng & Zhang, 2021; Lee et al., 2021). Among these instructional strategies, written corrective feedback employs L2 writing effectiveness, which may vary in form and content and types and features.

Studies have displayed inconclusive findings of the efficacy of written corrective feedback because of its wide range of methodological approaches and various types. Most importantly, various researchers use many terms to identify feedback, such as written feedback, corrective feedback, and teacher response and error correction, interchangeably used in related literature. Since Truscott's 1996 claim about written corrective feedback (Pourdana et al., 2021) was ineffective rather harmful, it was realized that there was a lack of evidence to advocate WCF. Kang and Han (2015) examined 22 studies concluded that written corrective feedback has a moderate to significant effect on learners' writing performance, specifically grammatical accuracy. The established research to explore the effectiveness of written corrective feedback has still put forward inconclusive findings of the form, tone and features of corrective feedback. However, most studies have been conducted on college and university students, and less has been explored about high school students. Therefore, the current research has been planned to be conducted on senior high school students, considering that these academic years are crucial for strengthening their knowledge base. This period allows them to have a strong grip over a second language, which would benefit their prospects. High school teachers use various combinations while giving students written corrective feedback on their writing compositions.

The present study aims to compare three feedback types, trying to provide insight into their effectiveness. Literature has produced inconsistent findings as to the effectiveness of WCF, ascertaining either its benefits (Bitchner, 2008; Bitchner & Knoch, 2010; Lim & Renandya, 2020; Li & Roshan, 2019; Sheen, 2009) or its harmfulness (Lee, 2019; Li & Vuono, 2019; Robinson et al., 2013; Truscott, 2004). The study also brings important insights about learners' preferences and perceptions about written corrective feedback, which enhances the contribution of this research. Given the importance of past tense acquisition and the potential benefits of WCF, this study investigates the effects of written corrective feedback on senior high school learners' acquisition of past tense forms. By employing a rigorous research design and accounting for relevant variables, this study aims to contribute to the existing knowledge on language acquisition and provide practical insights for educators working with senior high school learners.

Literature review

Feedback helps instructors inculcate students' critical thinking regarding academic assessment; its effectiveness depends upon how it is presented (Patra et al., 2022; Niu & Yu., 2020). Bottcher (2011) has regarded feedback as crucial in helping learners write better, and its objective is to highlight the positive aspects of writing rather than only point out its flaws. This feedback can be oral and written; however, the present study will only discuss written corrective feedback. In L2 (Second Language classes), written feedback is frequently given on the language organization and structure. Likewise, written feedback is considered an effective tool for students to enhance their comprehension level. In this way, they may improve the existing gap in their knowledge (Gholami, 2022; Sarandi, 2020, cited in Patra et al., 2022).

Different theorists have defined the term WCF in different ways. Nassaji and Kartchava (2017) considered it a response to a learner's inaccurate work to improve the target structure. Nassaji & Karim (2019) have elaborated that Corrective feedback may cover a variety of techniques, from implicit feedback (such as indirect feedback without correcting the error) to explicit (such as direct feedback with the proper form). However, this feedback can be positive or negative, elaborated by Long (1996). Positive feedback gives the learner the knowledge of acceptable and correct output according to the focused or target language (TL). At the same time, negative evidence aims at what is incorrect in TL. Likewise, these definitions make it clear that whether positive or negative input, the purpose is to make learners aware of the mistakes or errors overtly or covertly (Nassaji & Karim, 2019).

Li (2017) investigated the attitudes and beliefs of teachers and learners about corrective feedback. Yilmaz (2013) also highlighted the different types of CF and their interaction with learners' internal variables like language aptitude, anxiety, and working memory. Not only investigative studies but also research synthesis and meta-analysis have been done conducted by many researchers such as Li and Vuono (2019), Nassaji (2016), Li (2010), Lyster and Saito (2010). Some research studies (Ganapathy et al., 2020; Li & He, 2017; Chandler, 2003; Lee, 2004; Ellis et al., 2006; Nassaji & Swain, 2000; Saeli & Cheng, 2019) conducted studies on students' preferences that suggested that direct feedback might help in error correction utilizing direct WCF tools by the teachers. However, some researchers (i.e., Hosseiny, 2014; Iswandari, 2016; Trabelsi, 2019) viewed indirect feedback as beneficial for students, as the students themselves preferred the indirect feedback practices instead of correcting their errors by the instructors.

Direct Written Corrective Feedback

Direct corrective feedback has been defined as a correction that highlights the problem and offers a specific solution (Bitchener and Ferris, 2012). Direct written corrective feedback is characterized as the kind that provides learners with immediate, unambiguous adjustments to language forms and structures that are close to or above the mark (i.e., linguistic errors). Students who receive direct corrective criticism are encouraged to modify their writing and typically show improvement in subsequent tests (Bitchener and Ferris, 2012).

Indirect Written Corrective Feedback

In contrast, indirect, also called Implicit feedback, denotes the relation of the problem's form, often using specific codes, so that the pupils get excited to come up with ideas, conduct research, and remedy the error (Ferris & Roberts, 2001). Indirect corrective feedback is a sort of correction that identifies the location of the issue without making any adjustments. It may be supplied in several ways, such as by italicizing or highlighting an error (Bitchener & Storch, 2016). One of four methods can be used to do this: highlight or circle the error, note in the margin how many errors there are on a specific line, or use a code to identify the error's location and type (Ferris & Roberts, 2001; Dadashi, 2011; Bitchener & Knoch, 2010). According to Ferris (2004), teachers

should give implicit feedback to encourage students to engage in cognitive problem-solving and self-editing activities.

Metalinguistic Written Corrective Feedback

This type of feedback is provided by demonstrating a hint about the error, such as its nature or a justification of the grammar. Although it is not the same, the first case—informing the learner of the error's nature—matches the purpose of employing a correction code. Error Codes are acronyms that identify the type of mistake, such as a grammatical, vocabulary, or spelling issue. The next step is for students to develop their corrections. This type is less common since it takes more time than employing correction codes. Learners are given precise information regarding the inaccuracy in metalinguistic CF. According to Bitchener (2012), CF with clear information should be more advantageous for learning. According to Stefanou (2014), metalinguistic CF aids in bridging any gaps in learners' cognitive capacity by assisting them in both recognizing and comprehending errors at a deeper level. The error codes, however, could confuse the students because they may not understand or forget what each implies.

The literature has primarily explored the differences between the impacts of the two kinds of WCF, with some studies endorsing indirect WCF and others favouring direct WCF (Park, Song, and Shine, 2015). Additionally, it has been noted that indirect WCF used by some teachers in the manner of failure warning or error code can create issues when learners apply their changes. In contrast, direct WCF can be the quickest way to assimilate the correct target structures. As asserted by other researchers, both WCF techniques have a substantial impact on growing learners' intended grammatical correctness (See Al Harasi, 2019; Suzuki, Nassaji & Sato, 2019). Karim and Nassaji (2019) have also evaluated the previous studies related to the WCF and established that in previous studies, sometimes feedback is provided on every error made by the students. In this way, it becomes pretty challenging for the learners to achieve 'targeted' achievement. Accordingly, in the present study, the researcher has focused on only one grammatical category, i.e. past tense, to measure the tangible progress of the students after applying WCF. Besides the WCF's effectiveness, it is essential to investigate conceptually which form of WCF—direct, indirect, or metalinguistic—is more effective for students' L2 learning.

Learner's Perception and Preference regarding WCF

It is important to understand students' preferences for feedback. Aboubakr (2016) asserts that paying attention to students' preferences for written remarks can improve their writing. Investigating the preferences of students can help teachers become more cognizant of their learning preferences. The preferences of students might reveal a lot about how students want to learn to write. While some students enjoy having their mistakes corrected, others prefer to do it themselves. Preferences can have an impact since they reveal how teachers feel about the value of feedback. For students, there is a need to incorporate the teachers and students' opinions in written feedback studies to take into account their preferences (Balachandran, 2017). In an Iranian context, Saeli (2019) looked into how teachers behaved and what pupils preferred when given written corrective feedback (WCF). Semi-structured interviews were done with 14 teachers and 15 students studying and learning English at varying proficiency levels. The results demonstrated that teachers primarily offered teacher-generated grammatical comments because they thought their students preferred them. The students also liked the feedback that the teacher created. The teachers also provided detailed feedback on the grammatical faults since they believed that detailed correction was well received by their students. Similarly, the students favoured this. WCF is usually linked to unpleasant feelings like fear as unfavourable evidence (Yu et al., 2020), while it is also linked to pleasant feelings like delight and motivation for L2 learning. Despite the fact that learners frequently come into WCF scenarios, little is known about how it affects learners'

preferences for WCF types (Han and Hyland, 2019). The above studies demonstrate that the WCF's efficacy correlates with students' comprehension of and response to WCF types on various faults. Students' attitudes regarding WCF are favourable writing performance (Chen et al., 2016), and learners' capacity to use WCF effectively is likely to be hampered by mismatched conceptions of WCF between learners and teachers (Zhang, 2018; Saeli and Cheng, 2019). Zhang's (2018) study has also shown how students' comprehension of teachers' feedback intents may affect how well they evaluate a certain WCF type. These findings highlight how essential it is for teachers to consider students' preferences while presenting WCF.

Research Gap

Research on different sorts of input has uncovered some intriguing patterns, but further study is required due to the contradictory results. The degree to which the usefulness of written WCF is based upon the competence degree of an L2 writer is in doubt because a large portion of the research that is currently accessible has been conducted with lower competent or intermediate learners. According to Ellis (2008), "the students' present rate of linguistic understanding probably depends on the quality of direct and indirect response" (p.355).

The present study determines to explore whether there is a discrepancy in consequences among the specific types of written CF (Direct, Indirect, and Metalinguistic). The study also evaluates the learners' perception in the context of Pakistan, additional research that excludes the layout and implementation deficiencies of previous similarities among distinct kinds of WCF is also necessary. Therefore, the current study aims to ascertain how written WCF affects grammatical learning in senior high school students, focusing on Simple Past Tense. Similarly, the present study is expected to generate valuable findings in the existing theories related to the efficacy of the WCF and its types and how learners perceive them.

Research Questions

1. Does the written corrective feedback make a difference to a learner's writing proficiency?
2. Which type of written corrective feedback is more effective in improving senior high school learners' writing proficiency?
3. How do learners perceive different types of corrective feedback?

Methodology

This empirical study has explored the effects of direct written corrective feedback, indirect corrective feedback and Metalinguistic explanation on the writing performance of senior high school students. The study aimed to answer some questions about the effective written corrective feedback types that can help students progress in their writing drafts and how students feel about these feedback combinations provided to them by teachers.

The present study aimed to compare different types of written corrective feedback and their effects on improving learners' writing skills. The study involved pretest, immediate posttest and delayed posttest over two months while learners were treated according to feedback types. One week before the pretest, teachers and students involved in the study were provided with a complete informative session and requested to ask any questions before the consent form. The teachers were informed about the process and objectives to understand the purpose of the whole research. Ethical approval for the research was obtained from the City Science Higher Secondary School Ethics Committee, with decision number 159. Participants were informed about the research and provided informed consent.

Procedure

In week 1, the pretest was administered to all four groups, and they were asked to write a story on a given set of pictures. Group A received direct written corrective feedback, Group B received direct written and metalinguistic explanations, and Group C obtained indirect written corrective feedback on the learner's writing drafts. Since Group D is the control group, they got no feedback or minimal feedback as an overall general idea about the writings. The writings were returned to the students with instructions.

In weeks 2-4, all four groups were asked to write a story on the given set of pictures with a week's gap. Their writing drafts were treated with allocated feedback type to each group during these treatment weeks.

In week 5, an immediate posttest was administered, and students were asked to write a story on another set of pictures. According to the groups, written narrations were given certain feedback types and returned with instructions.

After one month, a delayed posttest was conducted to ensure the research findings of the pretest and posttest. The delayed test helped determine if there was any time impact on the effects of written corrective feedback. After the delayed posttest, all students filled out a perception questionnaire to determine what students felt about the WCF generally and WCF strategies. 20 students were randomly chosen to conduct a semi-structured interview to get deep insight about their opinion about the feedback process and ways. A partial credit system was used in this study. The wrong form of the past tense (e.g., "goes" instead of "went") was awarded 0.5 points, and one point was awarded to the correct use of the past tense (e.g., "went" instead of "go") (Li and Roshan, 2019). After scoring all the writing tasks, the following formula was used to calculate each student's total percentage score.

No. of points scored/No. of points possible (no. of obligatory contexts)*100

Participants

The study employed 60 participants aged between 15 and 17, both girls and boys from senior high schools in Pakistan. All the students were beginners, learning English for 6 to 12 years (See Table 1). The students were divided into four groups: five students with a relatively balanced gender ratio. Group A was provided with direct written feedback; Group B was given direct written feedback with metalinguistic explanation and, Group C with indirect corrective feedback as experimental groups, and Group D as the control group with no or minimal feedback.

Table 1: Participants' information

L1	Age	Country of origin	No. of years studying English	Academic qualification
Urdu	15-17 years	Pakistan	6-12 years	Senior High School

Instruments and Data Collection

The present study involves three instruments: story writing on a picture set, a questionnaire survey, and a semi-structured face-to-face interview to address the research questions. The study required the participants to write a story on a given set of pictures as pretest, immediate, and delayed post-tests. Six sets of pictures were used throughout the study. They were asked to write a story on the picture set for the pretest to assess their past tense errors. A survey was conducted through a questionnaire (Cronbach alpha co-efficient reported of .89) using a Likert 5-point format (*Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree*), which consisted of 16 questions. The first six questions concerned students' perceptions of WCF, and the rest ten the students'

preferences for WCF strategies. The questionnaire tool was adapted from Salami & Khadawardi (2022), Rowe & Wood (2008), and Marrs et al. (2016).

The present study utilized an interview to elicit qualitative data. The qualitative content analysis (QCA) tool was adapted and modified from (Rasool et al. 2022; Rasool et al., 2023a and Rasool, Aslam, Mahmood, et al. 2023) to analyze participants' interview responses. It helps develop conceptual frameworks, schematic models, and theories as the most frequently used approach in data analysis (Vaismoradi et al., 2013, 2016). The researcher created an interview guide (see Appendix) with open-ended questions based on the study's aims. Twenty participants were invited to the interview.

Findings and Data Analysis

The data collected from tests and perception questionnaires revealed the effects of different types of WCF on learners' and students' writing proficiency. All the writings were checked according to the prescribed feedback type throughout the study tenure, from pretest to delayed test. The total no. of words and the number of errors (target structure) were calculated and divided.

The pretest results collected through descriptive analysis showed group 2 (direct feedback) mean range 12.60 and group 3 (Meta linguistic explanation) mean range of 11.00 comparatively higher than group 1 (indirect feedback) and group 4 (no feedback). After the pretest was assessed, it was allocated to groups according to the feedback type and returned to students. The first treatment resulted in the highest mean score for group three and group four with no feedback, with a minimum mean score of 10.60. With the setting of treatment 2, the results showed group 3 learners' writing proficiency improving higher than other groups, followed by group 2 with the second highest mean score of direct feedback. The posttest showed that control group 4 showed students did not improve throughout the pretest, treatments and posttest, with the lowest mean score of 10.10. The highest mean rate (66.40) of improvement was found in group 3 with Metalinguistic explanation, group 2 with direct feedback with 25.20, and group 1 with indirect feedback with a slight difference of 24.40. A delayed test was administered after a month of the posttest to assess the time effect of treatment on a learner's writing improvement. The results showed a similar frequency of mean as highest (53.80) in group 3, followed by group 2 with 33.20 and group 1 with a visible difference of 22.40, whereas no improvement was witnessed in group 4 with 8.10 mean score, which appears to be decreasing showing no feedback discourages learners from improving and learning further. The study's findings showed metalinguistic explanation to be effective in writing improvement compared to other feedback types and the no feedback group. Instead of improving, it showed a decreasing trend. The findings also suggested that getting no feedback discourages students from learning further.

Table 2. Statistical Analysis

Sources of variance	SS	DF	MS	F	P
Treatment main effect	9186.256	3	3062.085	7.103	0.003
Duration main effect	6908.800	4	1727.200	7.579	<0.001
Treatment ×Time	6982.735	12	581.895	2.553	0.008
Error (treatment)	6897.179	16	431.074		
Error (Time)	14585.437	64	227.897		
Total	44560.407	99	6030.151		

Table no 2 describes the significance of treatment effect on learners' written proficiency with 0.003 p-values and time effect on writing improvement with 0.001 p-values. The data shows that treatments according to feedback type did display significant improvement, and later delayed tests proved that learners showed the same frequency of improvement.

Table 3. Multiple Comparisons

Measure: Words per error

LSD

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Group 1	Group 2	-5.36	5.872	.375	-17.81	7.09
	Group 3	-18.70*	5.872	.006	-31.15	-6.25
	Group 4	7.55	5.872	.217	-4.90	20.00
Group 2	Group 1	5.36	5.872	.375	-7.09	17.81
	Group 3	-13.34*	5.872	.037	-25.79	-.89
	Group 4	12.92*	5.872	.043	.47	25.37
Group 3	Group 1	18.70*	5.872	.006	6.25	31.15
	Group 2	13.34*	5.872	.037	.89	25.79
	Group 4	26.26*	5.872	.000	13.81	38.71
Group 4	Group 1	-7.55	5.872	.217	-20.00	4.90
	Group 2	-12.92*	5.872	.043	-25.37	-.47
	Group 3	-26.26*	5.872	.000	-38.71	-13.81

Based on observed means.

The error term is Mean Square (Error) = 86.215.

*. The mean difference is significant at the .05 level.

Post Hoc test LSD (See Table 3) was applied to the data collected by pretest, treatments, posttest and delayed tests and after multi comparisons. It is clearly shown that comparing group 3 with the other three groups, group 3 is significant.

Perception questionnaire

After the writing tests, participants were asked to fill out a perception questionnaire. The two-sectioned questionnaires covered questions about students' perceptions of WCF and WCF strategies. The reliability of the questionnaire results was reliable by .754 Cronbach's. The questionnaire findings add to the results of the writing tests as participants favored feedback and codes to be provided over errors by teachers.

Table 4. Students' Perceptions of WCF

No.	STATEMENT	1	2	3	4	5	Mean	t-test
Positive Perceptions								
2	Feedback causes proudness	0%	10%	20%	55%	15%	3.80	22.134
4	I want to be a better writer via Feedback	0%	10%	10%	70%	20%	4.05	26.390
6	Feedback makes confident	0%	10%	15%	55%	25%	3.95	19.914
8	Feedback enhances writing skills	0%	0%	5%	70%	25%	4.15	37.926
10	Feedback makes a better writer	0%	5%	5%	55%	35%	4.30	33.664
Negative Perceptions								
1	Feedback causes frustration	10%	65%	15%	20%	0%	2.25	11.052
3	Feedback directs to giving up situation	10%	45%	20%	20%	5%	2.50	9.747
5	Feedback induces feelings of badness	15%	60%	15%	10%	0%	2.15	10.987
7	Feedback seems unhelpful	40%	55%	5%	0%	0%	1.70	11.573
9	Feedback arouses wrong feelings to writing	5%	5%	5%	60%	25%	4.00	17.436

The first part of the questionnaire discovers how students perceive WCF and what they think about WCF provided by teachers. Table 4 shows the mean score and t-value after running one sample test with the highest values for the questions where participants have favoured WCF. The results discovered that learners want their teachers to provide feedback to learn better for their future writing. Not only do students want to get feedback, but they feel motivated to become better writers in the future as, survey questions 2 and 4 with a mean score of 3.80 and 4.05 clarify the finding. Survey question no. 8, with a 4.0 mean score and 37.926 highest t value, shows that participants perceive WCF as guide and motivation, followed by question 10 where they feel feedback makes them better writers, with a 33.664 t value. However, only 20% of students think feedback is frustrating, and 10% think feedback makes them feel like bad writers. 80% of

participants opine that WCF makes them feel confident, which shows positive feedback affects learners' writing performance.

Table 5. Students' Preferences in the WCF Strategy.

No.	STATEMENT	1	2	3	4	5	Mean	t
1	Right forms of feedback is encouraging	5%	5%	5%	65%	20%	3.95	16.771
2	Codes about errors is helpful	0%	20%	25%	50%	5%	3.42	16.540
3	Codes enhance motivation	0%	10%	5%	20%	65%	3.84	24.333
4	Underlining or circling without any codes is enough	15%	50%	5%	20%	10%	2.63	8.824
5	Errors location enhances critical thinking	0%	15%	30%	45%	10%	3.53	16.988
6	Error locating enhances improvement	0%	20%	15%	45%	20%	3.53	15.066
7	To be specific is helpful in errors location	0%	15%	15%	40%	30%	3.84	15.683
8	Only crucial errors are enough to highlight	0%	5%	35%	20%	40%	3.21	14.334
9	Only crucial errors location enhance motivation	0%	10%	5%	50%	35%	4.16	18.915
10	All errors location enhances areas of improvement	0%	0%	5%	65%	30%	4.32	32.301
11	Knowledge is gained if any error is being corrected	0%	0%	0%	70%	30%	4.37	38.422
12	Language knowledge is enriched through natural words/phrases	0%	0%	5%	60%	35%	4.32	32.301
13	Native-like corrections are highly recommended	0%	0%	20%	55%	25%	4.11	24.265
14	Electronic feedback is recommended	0%	0%	15%	75%	10%	4.05	33.695
15	Electronic feedback is easy for revisions	0%	0%	25%	70%	5%	3.89	29.934
16	Electronic feedback is understandable	0%	5%	75%	15%	5%	3.84	27.813

The second part of the survey questionnaire covers inquiries about preferred WCF strategies. The questions ask students to express how they like to get feedback and the types of errors they want to be corrected.

Feedback strategies

Data collected (Table 5) through the survey shows that students preferred to get codes and corrections over their errors compared to underlining or only pointing out the errors in their writing. 55% of participants favored the statement that helping codes helps them understand their mistakes, and 85% think codes can motivate them to learn further about their mistakes. Further, 65% of participants disagreed with only pointing out or highlighting errors and 55% agreed that only locating errors may help analyze the errors. 85% of participants think the correct form of correction is encouraging and motivates them to learn more. The highest t value, 24.333, goes with participants wanting to get codes for their errors.

Error types to be corrected

In the inquiry of error types, 70% of participants think error correction should be specific, and target structures should be corrected for efficient learning. Similarly, 60% of participants want crucial errors to be corrected. In contrast, all the participants agreed that correcting all errors may help them gain more knowledge and know more about their writing level. Additionally, 95% of participants like to get natural words and language options to be mentioned while assessing writing compositions, whereas 80% of the students favor getting more linguistically native-like corrections so that they may learn language more technically.

Electronic feedback

The last part of the survey questionnaire asked participants about electronic feedback, which yielded positive opinions. With the present ways of life, everything has moved to the electronic

and machines education department. Most educational methods employ assignments and examinations online, so electronic feedback is part of learning. Participants favored electronic feedback as an easy way to review their writings and rectify errors.

Interview Analysis

After the perception questionnaire, some students were interviewed face to face so that more detailed expressions of their opinions could be analysed about WCF and its strategies. For the sake of interpreting interview responses, a directed qualitative content analysis (DQCA) technique by Assarroudi et al. (2018) was employed with some modifications according to the study. The responses were categorically analysed under specific concerns, such as the need for WCF, preference of WCF strategies, and type of errors to be corrected.

The interview questionnaire was comprised of six questions.

1. Do you think written corrective feedback plays an important role in improving your writing skills?
2. Do you think written corrective feedback motivates students to improve their writing next time?
3. Do you think written corrective feedback makes students feel bad about their writing?
4. Do you prefer specific or targeted errors to be corrected?
5. Would you like all of your errors to be corrected?
6. What type of written corrective feedback do you prefer and why?

Learner's opinion about WCF and its need

All the students in the interview session shared their positive feelings about WCF provided by their teachers. Student participant 4 stated, "I think I will never learn or try to improve my writing if I do not get any feedback from my teachers" this shows they do not only take feedback seriously. Instead, they want to be corrected to learn better for future writing. Student participant 11 said, "I always focus on my error correction, or any mistake circled or underlined by my teacher and tried not to commit the same mistake again". Learners learn from the teacher's error corrections, which motivates them to improve.

Preferred WCF strategies

Most of the students expressed their preferences about written corrective strategies. Student interviewee 4 reported, "I would like my teacher to correct my mistakes, and if she explains the reason for my mistake, it will be easier for me to learn faster because sometimes I do not find why I made a mistake if I only get correction". Interviewee 16 described, "I do not usually look for reasons of my mistake if teacher points out any mistake because for grammatical mistakes, I feel difficulty. It is hard for me" learners feel some errors are difficult to understand the reason behind their mistake. Most students find it easy if the teachers explain the logic behind the error, specifically if errors are related to grammatical accuracy.

Types of errors for correction

When students were asked about the type of errors they wanted to be corrected or whether they wanted all of them to be corrected, their responses were mixed. Some students want all of their mistakes highlighted by teachers and feel all errors are equally important. On the contrary, some students reported more attention to grammatical errors than others. Student interviewee 9 said,

“... of course, I want all my errors to be checked by teachers and provide feedback because it will help me to improve in all aspects of my language, especially when I am writing.”

Interviewee 7 shared his views: *“... all errors are important but I am more concerned about my grammatical errors such as tenses like past tense or future tense. I want all my grammar mistakes to be checked by teachers and corrected.”*

Discussion

The findings of this study, concerning the first objective, are to investigate the effects of the WCF types, namely direct WCF, indirect WCF, and Metalinguistic explanation, on senior high school learners' Past simple tense acquisition in Pakistan. The analysis found that the various types of WCF effectively promote senior high school learners' Past simple tense acquisition. The following will provide possible explanations of this finding, followed by discussions of the different perceptions of WCF.

Understanding the efficacy of WCF

In WCF research, the scope of feedback is both a theoretically and pedagogically important. Regarding instructors' WCF practices, the most common feedback is unfocused and all encompassing, with a comparable ratio of direct to indirect WCF. The finding of the current study is in line with that of Ferris (1999), Archibald (2001), and Chandler (2003), who found that error correction has beneficial effects and aids students in increasing the accuracy of their writing. The participants of the three WCF groups improved their past simple tense scores as treated with specific feedback types, and the difference in scores between the pretest and post-test was visible. Similarly, Chandler (2003); Ergünay (2008), Bitchener, and Knoch (2010) found that written feedback improves writing skills. The immediate post-test scores showed that the metalinguistic explanation and direct WCF groups improved better than the indirect WCF group. This finding supports Ellis's (2009) study that direct WCF has the advantage of providing learners with explicit guidance about correcting their errors. Isar Gholaminia et al. (2014) found that meta-linguistic feedback could enable learners to use writing tasks more actively and efficiently. Suseno (2014) observed a significant difference in students' achievement in writing before and after feedback, and Sarvestani and Pishkar (2015) found that WCF promotes writing skills. Al-Hazzani and Altalhab (2018) found that WCF improved learners' skills and positively affected students' writing accomplishments. Further, the participants' interview responses suggest the same to support this finding.

As participant 2 said:

“...it (WCF) plays an important role. I learned a lot from the feedback. I know my writing skill was not good... I did not understand what I wrote when I had to read it later, I was in a confusing situation. But later on, I focused on my weak area where I am lacking; with the help of teachers' feedback, I overcame my mistakes.”

The current study's findings explored that all WCF groups improved their scores in immediate and delayed post-tests compared to no feedback (control group). It shows WCF makes a difference, and learners benefit from different WCF types: metalinguistic explanation, direct WCF, and indirect WCF, respectively.

Past simple tense acquisition and WCF

The current study targeted past simple tense errors to investigate the effects of WCF. Compared to the pretest, the results of the immediate post-test showed that learners' past simple tense errors decreased after treatment weeks, and their scores improved. The accuracy of L2 learners' written

texts has recently been studied and compared using various comprehensive WCF methods, such as direct vs. indirect WCF (Karim & Nassaji, 2018; Van Beuningen et al., 2012), and metalinguistic codes, both for grammatical and non-grammatical errors (Bonilla López et al., 2018). Van Beuningen et al. (2012) showed that thorough WCF, both direct and indirect, increased writing accuracy. However, it was discovered that only direct WCF led to grammatical accuracy in new writing, although indirect WCF was helpful for the non-grammatical accuracy gains. For enhancing learners' grammatical and non-grammatical correctness during text revision, Bonilla López et al. (2018) observed that direct WCF and codes were helpful; however, a long-term advantage (i.e., four weeks after feedback was provided) was only identified for direct correction. The target structure in this study was Past Tense. The study discovered that the indirect feedback group outperformed the direct feedback group on both the immediate and delayed post-tests. However, the effectiveness of indirect WCF cannot be generalized to other linguistic errors. These findings support the delayed post-test results of the current study, as the indirect WCF group showed improvement in scores, followed by the metalinguistic group.

As Participant 3 stated:

“I really want to improve my grammar, especially my past tense mistakes to be corrected. I usually confuse in verb forms.”

However, further research can be conducted to target other linguistic features to explore the effects of WCF on writing skills.

Understanding the efficacy of WCF types

The objective of the second research question was to identify which feedback type helps learners improve their writing scores effectively compared to other WCF types. The writing process comprised a pretest, treatment, immediate, and delayed post-test. The immediate post-test results of the metalinguistic explanation group showed the most improvement in scores, followed by the direct WCF group. On the other hand, indirect WCF and no feedback groups displayed no improvement in scores. Similarly, Mohamed (2001) used handouts in her comparative study of Metalinguistic explanation and indirect consciousness-raising. She found that metalinguistic explanation was more effective for low-intermediate learners, similar to the present study. N. Shintani and R. Ellis's (2013) study showed that a Metalinguistic explanation for low-proficiency learners was more effective than direct WCF in developing learners' explicit knowledge. After the metalinguistic explanation, the direct WCF group was second in improving learners' scores, which supports a previous study by Sheen (2007). The study found a difference between the effect of direct and indirect WCF where the direct WCF is preferable to indirect WCF for learners at the elementary or intermediate level because these students may skip the errors at lower levels because they are not proficient enough to recognize the correct form. The delayed post-test results demonstrated the same tendency in the results of all four groups.

The responses to the perception questionnaire also justified the findings of the immediate post-test, as when the participants were asked about error corrections, most preferred explanations and the correct forms of their errors. Most of the participants from all four groups disagreed with only underlining and circling errors. For more insight into learners' feelings about the WCF process, an interview session was conducted, and participants shared their views.

As ME2 responded,

“...direct written feedback is excellent because it improves my English grammar and spelling mistakes. Teachers also take pain to help students improve their writing skills faster, so if only mistakes are circled, it takes time. Sometimes I feel if teachers explain the mistakes, also it will be a great help.”

Conclusion

WCF is a widely researched area of language study; researchers have found mixed results about the positive and negative effects of feedback and the types of feedback that are most effective in learning and improving writing skills. The study focused on senior students as a possible time to develop a second language. The findings from the writing tasks and survey questionnaire, and interview discovered that learners like to get feedback and feel that feedback provided by the teachers is motivating and encouraging. The learners think feedback on their writings makes them feel better writers and leads them to learn more by comprehensively understanding their errors. Moreover, the writing tasks done by participants after the pretest and administrating treatments showed gradual improvement in writing skills, particularly in the group under metalinguistic explanation followed by direct feedback. Learners improved when they got their errors to be explained and corrected. The results of the posttest showed a noticeable difference among the groups. The control group showed no consistent signs of improvement, whereas the group with indirect feedback showed slow learning speed compared to direct feedback with error correction and group 3 with Metalinguistic explanation. After a one-month gap, a delayed posttest was administered, and findings showed that the groups showed the same result frequency after a certain time. The improved writing compositions still belonged to group 3, and group 1 showed minimum improvement with the control group as no much-improved writing skills. The study showed that Metalinguistic explanations do help learners improve in the past tense (target structure), so it can be concluded that,

- Learners prefer to get feedback on their writings to learn better for future written production
- Learners prefer to get all of their errors corrected, specifically crucial errors, to learn faster.
- Learners prefer to get corrections and explanations for their errors.
- Learners like to get electronic feedback for quick corrections for their assignments.

Future implications and limitations

Feedback as an essentially significant part of the two-way learning process has drawn magnificent attention from researchers throughout many decades. The current study was conducted on senior high school students with the same level of language proficiency to go through writing tasks and perception questionnaires finding effects of written corrective feedback. The study also explores how learners perceive WCF and WCF strategies. It was need of the time to understand what element and how the learning process can be elevated and successfully managed throughout classroom scenarios. By applying practical and desirable feedback methods, the learning process can be fastened and made interesting for L2 or foreign language learners. There is more room for research on junior school learners since second language learning starts in middle or junior high school. A bigger sample size can be appropriated for practical generalization of the results. For a more descriptive and detailed understanding of learners' perception of WCF, observations and data analysis on home assignments can be conducted, and more qualitative studies may explore what learners think about WCF.

Data Availability

Due to protecting and preserving respondents' confidentiality, the data sets developed or analyzed during the current study are not accessible to the public. Still, they are available upon reasonable request from the corresponding author.

Author contribution statement

Ushba Rasool: Conceived and designed the experiments; performed the experiments; wrote the paper.

Babar Nawaz Abbasi: Supervised and interpreted the data.

Min Gao: Contributed reagents, materials, analysis tools, or data.

Huang Wang: performed the experiments, wrote the paper.

Alamgir Hossain: Analyzed and interpreted the data.

Consent:

The participants provided their consent and were assured that all their information would be kept confidential and that their performance on any tasks would not affect their grades in this course. Those who volunteered to participate in the study filled out a consent form indicating their willingness to publish responses.

Funding statement:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of Interest's statement

The authors declare no conflict of interest.

Ethics approval and consent to participate: Ethical approval for the research was obtained from the City Science Higher Secondary School Ethics Committee, with decision number 159. Participants were informed about the research and provided informed consent.

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