



Written Corrective Feedback in EFL/ESL Writing Classes: A Systematic Review of Moderating Factors and Effective Practices

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Abstract

Written Corrective Feedback (WCF) is one of the most widely used and researched pedagogical strategies in teaching English writing as a foreign/second language (EFL/ESL), yet findings on its effectiveness remain mixed and scattered across different research contexts. This study synthesizes the literature on the types of WCF that have been investigated, the practices shown to be effective, and the factors moderating their effectiveness in EFL/ESL writing classrooms. To address this need, a systematic literature review (SLR) was employed as the primary research design, following the PRISMA 2020 guidelines. Articles were retrieved from six academic databases (Scopus, ERIC, Taylor & Francis Online, SpringerLink, SAGE Journals, and GARUDA), supplemented by Google Scholar as a source of grey literature. Following the identification, screening, and eligibility stages of the PRISMA 2020 flowchart, 20 empirical studies published between 2015 and 2025 were selected and synthesized to address three research questions. The review identified nine categories of WCF, with the direct-indirect dichotomy emerging as the most dominant classification framework. Direct WCF was found to be more effective in enhancing short-term grammatical accuracy, particularly among lower-proficiency learners, whereas indirect WCF was more effective in fostering long-term retention and learner autonomy, especially among higher-proficiency learners. No single type of WCF was found to be universally superior; rather, its effectiveness was shaped by several moderating factors, namely learner proficiency, error characteristics, affective and motivational factors, feedback modality, and the gap between teachers' beliefs and practices. These findings indicate that the effectiveness of WCF is context-dependent and multifaceted, suggesting that teachers should adopt a differentiated approach to WCF tailored to learners' needs and proficiency levels. Practically, these findings can guide EFL/ESL writing teachers in selecting and adapting WCF strategies to match learners' proficiency and error profiles, while also offering curriculum developers and teacher trainers an evidence-based foundation for designing more targeted feedback practices in writing instruction.

Keyword: Written Corrective Feedback; Systematic Review; Moderating Factors; Effective Practices

INTRODUCTION

Writing is one of the most important language skills to master, as it plays a significant role in the overall language learning process. However, writing is widely regarded as a difficult skill, particularly for most English as a Foreign Language (EFL) learners, who face numerous challenges in their writing practice. Writing in a foreign

language is especially challenging to develop, more so when students lack a strong foundation in either their first language (L1) or second language (L2) (Iftidiani & Nurafiani, 2023). Therefore, writing should be a primary concern for teachers, students, and academics alike as part of broader language development efforts.

Previous studies have consistently reported that EFL students experience challenges across multiple dimensions of writing proficiency, including grammatical accuracy, coherence and cohesion, organization, vocabulary use (lexical choice), and mechanics (Riadil et al., 2023). To address these challenges, teacher feedback plays a crucial role in supporting students' writing development. Effective feedback helps students gain a deeper understanding of both their weaknesses and strengths, while also improving their writing outcomes. Beyond technical correction, feedback has also been shown to enhance students' self-efficacy and reduce writing anxiety (Ghane et al., 2024). In this context, Written Corrective Feedback (WCF) has emerged as one of the most widely used and valued pedagogical strategies among English language teachers, making it a central focus of discussion in second language writing research.

Written corrective feedback (WCF), also known as grammar correction or written error correction, is the provision of negative evidence on overt errors in students' writing, and is considered a ubiquitous pedagogical practice in second language instruction (Hamano-Bunce, 2022). It serves as a signal to students, helping them recognize errors that need correction and enabling them to self-correct (ELEbyary et al., 2024). In second language learning, WCF is a crucial element of the writing process because it helps students identify deficiencies in their writing. The primary purpose of providing WCF is to help students identify, understand, and correct their errors, and more specifically, to enhance students' awareness, or noticing, of the difference between their interlanguage and the target language (ELEbyary et al., 2024). It also facilitates correction by providing information that enables students to revise and edit their writing to make it more accurate (Nguyen & Chu, 2024).

According to Ellis (2009) various types of WCF have been developed to support the learning process are direct CF, indirect CF, metalinguistic CF, the focus of the feedback, electronic feedback, and reformulation. Direct CF, also known as direct feedback, involves the instructor providing students with the correct language form. This could be done by crossing out an incorrect word or writing the correct form next to the error. Indirect feedback merely indicates that an error exists without providing a correction. This can be done by marking the specific location of the error or simply marking the margin of the line containing the error. The goal is to encourage students to reflect on and correct their own work. Metalinguistic feedback provides an explicit explanation of the nature of the error through error codes, such as "art" for article errors or "ww" for word choice errors, or brief grammatical descriptions that explain the relevant rules. Furthermore, focused vs. unfocused CF relates to the number of error types corrected. Focused CF corrects one or a few specific types of errors to help students stay focused. In contrast, unfocused CF attempts

to correct all or most errors, which can overwhelm students with too much information. Electronic feedback provides links to external sources, such as concordance files, so students can compare their writing with examples of correct language usage. Finally, reformulation involves a native speaker or instructor rewriting a student's text to make it sound more natural without altering the content. This allows students to compare their original writing with the reformulated version (Ellis, 2009).

Over the past few decades, WCF has been one of the most extensively researched and debated topics in the field of second-language writing (Ferris, 2022, as cited in Mao et al., 2024). While some empirical evidence supports its effectiveness in improving writing accuracy (Mohebbi, 2021), others continue to question its long-term benefits, with Truscott maintaining that error correction may be unnecessary or even harmful (Gebremariam, 2024; Wondim et al., 2024), the majority of teachers and students still consider WCF an important teaching practice. To this day, WCF continues to be studied because of its crucial role in supporting the development of students' writing skills.

Previous studies on the effectiveness of WCF have produced inconsistent results. Some studies have found that WCF improves students' writing accuracy and language development, while others have not. In general, WCF has been shown to have a positive, albeit moderate, effect on the grammatical accuracy of second-language learners, with this effect proving durable across short-, medium-, and long-term measures (Brown et al., 2026). WCF is also considered to help students produce more accurate writing, both when creating new texts and revising existing ones (Brown et al., 2026; Hamano-Bunce, 2025). However, it is important to note that WCF is most effective when students revise the same text, but this effect does not always persist when they are asked to write something new. In other words, improvements gained from one piece of writing do not automatically 'carry over' to the next (Gebremariam, 2024; Li & Tan, 2022).

Furthermore, some studies have highlighted the drawbacks of WCF, particularly when implemented comprehensively or when all errors are corrected at once. This approach is often less effective because it consumes a significant amount of the teacher's time and overwhelms students with too many corrections at once (Wang & Han, 2022). In addition, findings highlight that the success of WCF is greatly influenced by how feedback is provided and by the characteristics of each student, with students' own proficiency level being one of the most influential factors (Zheng et al., 2023). Students who are already more proficient tend to be better able to critically evaluate and utilise feedback than students whose skills are still developing (Liu, 2025). These patterns suggest that the effectiveness of WCF cannot be separated from the conditions under which it is delivered, a point further supported by several other moderating factors identified in the literature.

The type of error also plays a role, as WCF is more effective for errors that follow clear rules, such as those involving articles or tenses, compared to more idiomatic errors involving word choice (Nguyen & Chu, 2024). Furthermore, the method and intensity of feedback delivery determine the results: corrections focusing on a few types of errors are

generally more effective than comprehensive corrections. However, too much feedback can overwhelm students and cause them to lose motivation. Direct corrections are, on the other hand, more helpful to students when revising their writing (Nguyen & Chu, 2024; Shen & Chong, 2022).

Another important factor is student engagement during the revision process, including effort to understand feedback, concrete actions taken during revision and emotional reactions to corrections. Students who engage actively and critically typically demonstrate better results than those who merely accept corrections passively (Chen et al., 2023). Finally, the learning context also plays a role, as students learning English as a second language (ESL) or as a foreign language (EFL) exhibit different levels of motivation and attitudes in responding to WCF (Nguyen & Chu, 2024).

Numerous studies on written corrective feedback (WCF) have been conducted by researchers around the world, examining the types of WCF used, their effectiveness in improving students' writing, and the factors that influence their success, such as learner proficiency, error type, and feedback delivery method. However, these findings are scattered across different contexts, learner populations, and research designs, and the results are often inconsistent—some studies report clear benefits of WCF while others find limited or context-dependent effects. Few studies have systematically summarized and synthesized the various types of WCF used, identified the most effective WCF practices for writing instruction, or mapped the factors that moderate the effectiveness of these practices across studies. As a result, the inconsistent findings reported in the literature remain difficult to interpret without a framework that accounts for these moderating factors. Yet a comprehensive understanding of these three aspects—the types of WCF, effective WCF practices, and the factors that moderate their effectiveness—is crucial for teachers and education practitioners when determining appropriate feedback strategies for students. In light of this, this study employs a systematic review approach to examine and synthesize findings from previous studies on WCF in EFL/ESL writing classes. It is hoped that this approach will provide a more comprehensive overview of the types of WCF that have been studied, the WCF practices that have been proven to improve the quality of students' writing, and the factors that moderate the effectiveness of these practices.

METHOD

Research Design

This study employed a systematic literature review (SLR) design in accordance with the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Page et al., 2021). The study aims to analyze effective written corrective feedback (WCF) practices in English as a Second/Foreign Language (ESL/EFL) writing class, based on three research questions: (1) What types of Written Corrective Feedback (WCF) have been implemented in EFL/ESL writing class, as reported in the existing literature? (2) Which WCF

practices have been found to be the most effective in improving students' writing performance in EFL/ESL writing classrooms? (3) What factors moderate the effectiveness of Written Corrective Feedback (WCF) in improving students' writing performance in EFL/ESL writing classrooms?

Eligibility Criteria

Inclusion and exclusion criteria were established prior to the literature search to ensure consistency in article selection. Articles were included if they met all of the following criteria: (a) they were empirical studies; (b) they focused on WCF in ESL/EFL writing instruction; (c) they were published in peer-reviewed journals; (d) they were written in English; (e) they were published between 2015 and 2025; and (f) they provided data related to the effectiveness or implementation of WCF. Conversely, articles were excluded if they were literature reviews, editorials, book reviews or conference proceedings without empirical data, discussed only oral feedback, were outside the context of second or foreign language learning, or did not have a full text available.

Information Sources and Search Strategy

The article search was conducted across six academic databases: Scopus, ERIC, Taylor & Francis Online, SpringerLink, SAGE Journals, and GARUDA. Google Scholar was also used for supplementary searches and to identify grey literature. Using multiple databases aimed to broaden the scope of the relevant literature. The search strings used were as follows:

("written corrective feedback" OR "written feedback" OR "error correction") AND ("ESL" OR "EFL" OR "second language writing") AND ("writing classes" OR "writing instruction" OR "academic writing")

This search string was adapted to the format of each database.

Study Selection Process

All search results were exported to a reference management tool, where they were merged and deduplicated. The selection process adhered to the four-phase PRISMA 2020 flowchart: Identification, Screening, Eligibility, and Inclusion (Page et al., 2021). A total of 50 articles were found across all databases. After removing duplicates, 43 unique articles remained for screening. The titles and abstracts of all articles were reviewed based on predetermined criteria. At this stage, a number of articles were excluded because they did not focus on WCF, were not related to writing instruction, or were outside the ESL/EFL context. Some of the articles excluded at this stage included: (1) WCF studies in the context of Korean as a foreign language, (2) WCF studies by teachers that were not specific to the ESL/EFL context, (3) WCF studies that focused solely on grammar acquisition, (4) studies of automated written corrective feedback (AWCF) based on Grammarly, and (5) digital game-based studies that only measured the grammatical accuracy of English texts.

Following the screening process, 20 articles were identified as meeting all the criteria and were included in the final synthesis.

Data extraction

Data from the 20 included articles were systematically extracted using a form covering: author names and publication years, the type of WCF used, research design, key findings regarding the effectiveness of WCF, and factors moderating its' Effectiveness.

FINDINGS

Types of Written Corrective Feedback Implemented in Writing Instruction

Based on the synthesis of the 20 reviewed studies, nine categories of Written Corrective Feedback (WCF) were identified as having been implemented and investigated in EFL/ESL writing instruction, with the direct–indirect dichotomy emerging as the most prevalent classification framework, appearing in 15 (Anggunsari & Wahyuni, 2023; Annury et al., 2023; Budianto et al., 2020; Guk & Fithriani, 2026; Karim & Nassaji, 2020; Kim, 2019b; Kisananto, 2016; Minh Nguyen & Anh Chu, 2024; Pabur et al., 2025; Pertiwi & Ashadi, 2024; Setiani & Suharjono, 2025; Sherpa, 2021; Tanveer et al., 2018; Triristina, 2018; Vazifeshenas, 2025) and 17 (Annury et al., 2023; Budianto et al., 2020; Guk & Fithriani, 2026; Karim & Nassaji, 2020; J. H. Kim, 2019b; Y. Kim & Emeljanova, 2021; Kisananto, 2016; Minh Nguyen & Anh Chu, 2024; Pabur et al., 2025; Pertiwi & Ashadi, 2024; Setiani & Suharjono, 2025; Sherpa, 2021; Shirotha, 2016; Tanveer et al., 2018; Triristina, 2018; Vazifeshenas, 2025; Veren et al., 2020) of the 20 studies, respectively. Direct WCF, in which teachers explicitly provide the correct linguistic form, has been extensively investigated across educational contexts ranging from secondary schools (Anggunsari & Wahyuni, 2023; Budianto et al., 2020) to higher education (Guk & Fithriani, 2026; Karim & Nassaji, 2020; Kisananto, 2016). In contrast, indirect WCF—where teachers merely indicate the location of errors without supplying the correct forms—has been explored with comparable breadth, including studies emphasizing learner autonomy (Shirotha, 2016; Veren et al., 2020). The widespread adoption of these two approaches across educational levels and cultural contexts suggests that the direct–indirect dichotomy continues to serve as the principal conceptual framework underpinning contemporary WCF research.

Beyond the primary dichotomy, several variants further refine the classification of WCF. Metalinguistic WCF, which incorporates grammatical explanations alongside corrective feedback, was identified in six studies (Guk & Fithriani, 2026; Nguyen & Chu, 2024; Pertiwi & Ashadi, 2024; Tanveer et al., 2018; Triristina, 2018; Vazifeshenas, 2025). Rather than constituting an independent category, it is generally conceptualized as a variant of either direct or indirect WCF. Likewise, the distinction between focused WCF, which targets selected error types, and unfocused WCF, which addresses all errors, was examined in four studies (J. H. Kim, 2019a; Nguyen & Chu, 2024; Pertiwi & Ashadi, 2024; Setiani & Suharjono,

2025). This distinction reflects increasing scholarly attention to learners' cognitive capacity to process corrective feedback efficiently.

A smaller number of studies expanded the scope of WCF by investigating alternative feedback sources and delivery modes. Peer feedback and collaborative revision were examined in four studies (Annury et al., 2023; Y. Kim & Emeliyanova, 2021; Shang, 2022; Yu et al., 2020b), primarily as complementary or comparative approaches to teacher-provided feedback. Shang (2022), in particular, compared Online Peer Feedback (OPF) with Automated Corrective Feedback (ACF), representing the only study in the corpus that explicitly investigated technology-mediated WCF.

Pertiwi and Ashadi (2024) further introduced Reformulation as a distinct approach, in which the reviewer rewrites learners' texts to provide implicit corrective feedback rather than marking or explicitly correcting individual errors, representing the only study in the corpus to examine this feedback type (Pertiwi & Ashadi, 2024). In a similar vein, Vazifeshenas (2025) included Oral Corrective Feedback (OCF) as a point of comparison to WCF, allowing an assessment of the relative effectiveness of written versus oral feedback modalities (Vazifeshenas, 2025). Other studies further broadened the conceptualization of WCF by comparing it with non-corrective forms of feedback. For example, Yu, Jiang, and Zhou (2020) contrasted WCF with scoring, process-oriented feedback, and expressive feedback to evaluate their respective motivational effects (Yu et al., 2020b). Collectively, these findings indicate that although the direct-indirect dichotomy remains the dominant and most established framework for classifying WCF, the emergence of newer variants—particularly technology-mediated and alternative feedback sources—signals that WCF research is gradually diversifying beyond this traditional binary, even though empirical evidence for these newer types is still limited.

Effective WCF Practices for Improving Writing Performance

The effectiveness of Written Corrective Feedback is context-dependent rather than universal, varying according to learner characteristics, instructional contexts, and the nature of writing tasks. The synthesis revealed that five studies consistently identified direct WCF as the most effective approach for reducing errors in both revision tasks and subsequent writing, particularly among learners with limited linguistic knowledge (Karim & Nassaji, 2020; Kisananto, 2016). Similar findings were reported in secondary school contexts by Anggunsari and Wahyuni (2023) and Budianto et al. (2020), while Guk and Fithriani (2026) found that direct WCF enabled learners with special educational needs to complete writing tasks with reduced cognitive demands (Anggunsari & Wahyuni, 2023; Budianto et al., 2020; Guk & Fithriani, 2026). Collectively, these findings support the argument that explicit correction minimizes interpretive ambiguity, thereby facilitating accurate revision among learners who have not yet developed sufficient grammatical knowledge to identify and correct errors independently.

In contrast, four studies (Setiani & Suharjono, 2025; Sherpa, 2021; Shirotha, 2016; Veren et al., 2020) concluded that indirect WCF was more effective in fostering long-term writing

accuracy and promoting learner autonomy, particularly among higher-proficiency learners. Improvements resulting from indirect WCF were maintained in delayed post-tests, suggesting greater retention of learning outcomes over time. Sherpa (2021), for instance, reported that indirect WCF outperformed both direct WCF and the control condition in improving learners' accuracy in the use of verb tenses and articles (Sherpa, 2021). Likewise, Shirotha (2016) attributed this advantage to the deeper cognitive processing required when learners are encouraged to analyze and resolve their own errors (Shirotha, 2016). Taken together, these findings reveal a consistent pattern: whereas direct WCF appears to be more beneficial for immediate improvement, indirect WCF is more conducive to sustained language development and the cultivation of learner autonomy.

The largest effectiveness cluster, comprising five studies, concluded that no single type of WCF can be regarded as universally superior (J. H. Kim, 2019a; Nguyen & Chu, 2024; Pabur et al., 2025; Pertiwi & Ashadi, 2024; Tanveer et al., 2018). In their systematic review, Nguyen and Chu (2024) explicitly argued that the effectiveness of WCF is moderated by learner proficiency and the characteristics of writing tasks rather than by the feedback type itself (Nguyen & Chu, 2024). This perspective is further supported by several context-specific findings. Kim and Emelianova (2021) demonstrated that collaborative pair revision yielded higher revision accuracy than individual revision, although this advantage did not transfer significantly to subsequent independent writing (Y. Kim & Emelianova, 2021). Shang (2022) reported that Online Peer Feedback (OPF) was more effective than Automated Corrective Feedback (ACF) in improving grammatical accuracy, whereas ACF showed greater benefits for lexical variation (Shang, 2022). Similarly, Vazifeshenas (2025) found that written WCF significantly outperformed Oral Corrective Feedback (OCF) in enhancing text organization and writing mechanics (Vazifeshenas, 2025). Overall, the findings addressing RQ2 suggest that the question of which WCF practice is the most effective cannot be answered in absolute terms. Rather, the effectiveness of WCF depends on multiple moderating factors, which are discussed in the following section.

Factors Moderating the Effectiveness of Written Corrective Feedback

Beyond identifying the types of WCF investigated and the practices found to be most effective, this review further examined the factors that moderate WCF's effectiveness across the reviewed studies, addressing RQ3. Based on the synthesis of the 20 reviewed studies, learner proficiency emerged as the most prominent moderator, appearing in eight (Anggunsari & Wahyuni, 2023; Budianto et al., 2020; Guk & Fithriani, 2026; Karim & Nassaji, 2020; Kisananto, 2016; Sherpa, 2021; Vazifeshenas, 2025; Veren et al., 2020) of the twenty reviewed studies. A consistent pattern emerged across these studies: direct WCF was generally more effective for lower-proficiency learners, who often lack the grammatical knowledge required to identify and correct errors independently, whereas indirect WCF proved more beneficial for higher-proficiency learners

capable of engaging in deeper cognitive processing and reflective self-correction (Kisnanto, 2016; Veren et al., 2020). Nevertheless, Budianto et al. (2020) reported findings that diverged from this general trend, demonstrating that direct WCF remained more effective regardless of learners' proficiency levels (Budianto et al., 2020). This inconsistency suggests that the moderating role of learner proficiency may vary across instructional settings and learner populations.

Beyond learner proficiency, the characteristics and salience of linguistic errors also moderated the effectiveness of WCF (Karim & Nassaji, 2020; J. H. Kim, 2019a; Veren et al., 2020). Kim (2019) reported that complex, low-salience errors, such as article usage, require more focused corrective feedback to facilitate learning (J. H. Kim, 2019a). Similarly, Veren et al. (2020) observed that tense-related errors remained difficult to eliminate despite repeated exposure to indirect WCF, indicating that certain grammatical structures require sustained instructional support (Veren et al., 2020).

Affective and motivational factors also significantly influenced learners' responses to corrective feedback. Yu, Jiang, and Zhou (2020) found that WCF tended to reduce learners' motivation when compared with expressive feedback (Yu et al., 2020b). In contrast, Setiani and Suharjono (2025), emphasized that learners who actively engaged with corrective feedback were more likely to revise their writing successfully (Setiani & Suharjono, 2025). These findings underscore the importance of learner engagement as a prerequisite for maximizing the pedagogical benefits of WCF.

Two additional moderating factors emerged from the reviewed literature: feedback modality (Shang, 2022; Vazifeshenas, 2025) and the teacher belief–practice gap (Annury et al., 2023; Budianto et al., 2020; Pertiwi & Ashadi, 2024). Shang (2022) and Vazifeshenas (2025) demonstrated that the mode through which feedback is delivered significantly influences learning outcomes. Specifically, written feedback produced more substantial improvements than oral corrective feedback in text organization and writing mechanics, while technology-mediated Online Peer Feedback (OPF) yielded greater gains in grammatical accuracy than Automated Corrective Feedback (ACF).

Another recurring theme concerns the discrepancy between teachers' pedagogical beliefs and their actual classroom practices. Annury et al. (2023) documented that although teachers generally recognized the value of comprehensive WCF, they were often unable to implement it consistently because of time constraints and heavy instructional workloads. Likewise, Pertiwi and Ashadi (2024), together with Budianto et al. (2020), reported that learners tended to prefer direct WCF because it provides explicit guidance and reduces uncertainty during revision, even though such preferences do not necessarily align with evidence supporting the long-term benefits of indirect WCF. Collectively, these five clusters of moderating factors demonstrate that the effectiveness of WCF is inherently multifactorial, resulting from the interaction among learner characteristics, error features, feedback

modality, instructional context, and teachers' pedagogical beliefs rather than from the feedback type alone.

DISCUSSION

The findings presented in the previous section address the three research questions concerning the types of Written Corrective Feedback (WCF) investigated in the literature (RQ1), the WCF practices found to be most effective in improving writing performance (RQ2), and the factors moderating their effectiveness (RQ3). This section discusses these findings in an integrated manner by relating them to major theoretical debates in second language acquisition research and by highlighting their theoretical and pedagogical implications, as well as the limitations of the present review.

Diversity of WCF Types and the Continued Dominance of the Direct–Indirect Dichotomy

The identification of nine WCF categories demonstrates that the landscape of WCF research in EFL/ESL writing instruction is considerably more diverse than earlier studies often suggested, which primarily conceptualized WCF through the binary distinction between direct and indirect corrective feedback. The predominance of these two categories—appearing in 15 and 17 of the 20 reviewed studies, respectively—confirms that they continue to constitute the principal conceptual framework underpinning WCF research, consistent with the long-established classification tradition in the literature.

The emergence of additional feedback types, including metalinguistic WCF, focused and unfocused WCF, and alternative feedback sources such as peer feedback, technology-mediated corrective feedback, reformulation, and comparisons with Oral Corrective Feedback (OCF), suggests that the field has gradually evolved beyond the traditional direct–indirect dichotomy. Rather than focusing solely on whether feedback is explicit or implicit, recent research increasingly examines how corrective feedback is delivered, who provides it, and through which instructional modality. Nevertheless, the relatively small number of studies investigating these emerging feedback types—most of which are represented by only a single study—indicates that research on alternative WCF approaches, particularly technology-mediated feedback, remains in its early stages. Consequently, stronger empirical evidence is needed before their effectiveness can be generalized across instructional contexts.

WCF Effectiveness: Balancing Immediate Accuracy and Long-Term Learner Development

The most salient finding emerging from RQ2 is the systematic contrast between direct WCF, which appears to be more effective in improving immediate grammatical accuracy among lower-proficiency learners, and indirect WCF, which demonstrates greater effectiveness in promoting long-term retention and learner autonomy, particularly among more proficient learners. This pattern is consistent with explanations grounded in cognitive processing theories. Direct WCF provides explicit corrective input that can be readily incorporated by learners who have not yet developed sufficient grammatical knowledge to perform independent self-correction. In contrast, indirect WCF requires learners to engage in

deeper cognitive processing through hypothesis testing and self-repair, thereby facilitating more durable language learning and longer-lasting retention.

These findings are consistent with the proposition that noticing and active cognitive engagement with linguistic errors play a central role in second language acquisition. They also align with Skill Acquisition Theory, which posits that the proceduralizing and automatization of linguistic knowledge depend on active practice rather than mere exposure to correct language forms.

Perhaps the most noteworthy finding, however, is that the largest evidence cluster, comprising five studies, concluded that no single type of WCF is universally superior. This conclusion shifts the focus of the long-standing debate from asking *whether WCF is effective* or *which type of WCF is the most effective* toward a more context-sensitive question: Which type of WCF is most effective for which learners, for which error types, and under what instructional conditions? This shift reflects the increasing maturity of WCF research, moving beyond the search for a universal pedagogical solution toward a more nuanced understanding of the context-dependent nature of corrective feedback effectiveness.

Moderating Factors as the Key to Understanding WCF Effectiveness

The findings addressing RQ3 further reinforce this interpretation by identifying learner proficiency as the most influential moderating factor, appearing in eight of the twenty reviewed studies. The consistently observed pattern—direct WCF benefiting lower-proficiency learners and indirect WCF benefiting more advanced learners—helps explain why previous studies have sometimes reported seemingly contradictory findings regarding WCF effectiveness. Rather than reflecting methodological inconsistencies, these differences are more plausibly attributable to variations in learner characteristics across instructional contexts.

The findings reported by Budianto et al. (2020), which demonstrated the superiority of direct WCF regardless of learner proficiency, suggest that proficiency alone cannot fully account for differences in WCF effectiveness. Instead, learner proficiency is likely to interact with other contextual variables, including institutional settings, instructional practices, and task characteristics.

The nature of linguistic errors also emerged as an important moderating factor. Specifically, distinctions between rule-based and idiosyncratic errors, as well as differences in error salience, help explain why certain grammatical structures, such as articles and verb tenses, often remain resistant to improvement despite repeated exposure to corrective feedback.

The identification of affective and motivational factors, together with the teacher belief–practice gap, broadens the conceptual scope of WCF research beyond its traditional cognitive-linguistic orientation to encompass socio-affective and institutional dimensions. In particular, evidence suggesting that WCF may reduce learner motivation when compared with expressive feedback highlights a potential trade-off between maximizing linguistic

accuracy and maintaining learners' psychological well-being. This finding underscores the importance of considering learners' emotional responses when designing and implementing corrective feedback practices.

Theoretical and Pedagogical Implications

From a theoretical perspective, this review contributes to the long-standing debate concerning the value of WCF, often framed as the Truscott–Ferris debate, by demonstrating that WCF effectiveness should not be viewed as a binary issue of being either universally effective or ineffective. Rather, the findings indicate that WCF constitutes a multifactorial phenomenon, shaped by the interaction among feedback type, learner characteristics, error characteristics, feedback modality, and instructional context. This multifactorial nature is echoed in the Indonesian EFL context, where studies have shown that learners' preferences for particular WCF types (e.g., direct versus indirect, coded versus uncoded) vary considerably and interact with their perceptions of usefulness (Putri et al., 2021; Saragih et al., 2021). Similarly, Elfiyanto and Fukazawa found that the relative effectiveness of teacher, peer, and self-feedback in improving Indonesian senior high school students' writing achievement was not uniform, further reinforcing the argument against a one-size-fits-all conception of WCF (Elfiyanto & Fukazawa, 2021). The moderating framework identified in RQ3 provides a useful conceptual foundation for future experimental research by highlighting the importance of controlling for these potential confounding variables when investigating WCF effectiveness.

The findings support the adoption of a differentiated approach to WCF. Teachers are encouraged to provide more intensive direct WCF for lower-proficiency learners and for linguistically complex errors while gradually incorporating indirect WCF as learners develop greater linguistic competence and self-regulatory capacity. Such a progression is expected to foster long-term learner autonomy rather than merely improving immediate writing accuracy. In addition, the discrepancy between teachers' pedagogical beliefs and their actual classroom practices—often attributable to workload and time constraints—highlights the need for greater institutional support and professional development. Such support would enable teachers to implement evidence-informed WCF practices instead of relying primarily on learners' preferences for direct feedback, which may not necessarily produce the most beneficial long-term learning outcomes.

Limitations of the Review

Several limitations should be acknowledged, each involving both an inhibiting factor that constrains the interpretation of the findings and a supporting factor that helps offset this constraint. First, this review synthesized evidence from only twenty studies, the majority of which were conducted in Asian EFL contexts, particularly Indonesia. This concentration functions as an inhibiting factor, limiting the generalizability of the findings to ESL settings and to EFL contexts outside Asia, where instructional traditions and learner backgrounds may differ considerably. At the same time, it also constitutes a supporting factor, as it

allowed the review to generate a coherent and context-specific understanding of WCF practices within a rapidly growing EFL research community, yielding insights that are directly relevant to similarly under-researched Southeast Asian settings. Second, the synthesis employed a narrative review approach based on the frequency of thematic patterns across studies rather than a quantitative meta-analysis incorporating effect sizes. This methodological choice acts as an inhibiting factor, since the relative magnitude of effectiveness across different WCF practices could not be statistically compared. However, it simultaneously served as a supporting factor by allowing the inclusion of methodologically heterogeneous studies—experimental, quasi-experimental, and qualitative alike—thereby capturing richer contextual and affective nuances, such as learner motivation and teacher beliefs, that a strictly numerical meta-analysis would likely have excluded. Third, the review did not include a formal methodological quality appraisal of the primary studies using established instruments such as the Critical Appraisal Skills Programme (CASP) or the Mixed Methods Appraisal Tool (MMAT). This omission is an inhibiting factor, as differences in research quality may have influenced the patterns identified in the synthesis. Nonetheless, a supporting factor lies in the fact that only peer-reviewed studies with clearly reported methodologies and sampling procedures were included, providing a baseline level of methodological credibility even without a formal appraisal score. Finally, most of the primary studies evaluated WCF outcomes over relatively short instructional periods, and only a limited number incorporated delayed post-tests to assess long-term retention. This constraint inhibits confidence in current claims regarding the superiority of indirect WCF for sustained language development, which should therefore be interpreted cautiously. Even so, this pattern also functions as a supporting factor for the review's contribution, since identifying this evidentiary gap sharpens the field's understanding of where future longitudinal research is most urgently needed, a priority addressed directly in the recommendations that follow.

CONCLUSION

The systematic review of 20 empirical studies revealed that the direct–indirect dichotomy remains the dominant framework for classifying Written Corrective Feedback (WCF). The findings further indicate that direct WCF is generally more effective in improving short-term grammatical accuracy among lower-proficiency learners, whereas indirect WCF is more effective in promoting long-term retention and learner autonomy among higher-proficiency learners. Importantly, no single type of WCF was found to be universally superior across instructional contexts. Learner proficiency, error characteristics, affective and motivational factors, feedback modality, and the teacher belief–practice gap also emerged as the principal moderating factors influencing the effectiveness of WCF. Taken together, these findings suggest that the effectiveness of WCF is context-dependent and multifactorial, rather than an inherent characteristic of any particular feedback type. Accordingly, teachers are encouraged to adopt a differentiated approach to WCF, tailoring

feedback to learners' proficiency levels and the nature of linguistic errors instead of applying a uniform feedback strategy to all learners.

Future research should employ more longitudinal research designs incorporating delayed post-tests to examine the durability of WCF effects over time, expand the evidence base beyond Asian EFL contexts to improve the generalizability of the findings, and conduct quantitative meta-analyses to compare the effectiveness of different WCF types using standardized effect sizes. In addition, further investigation into technology-mediated WCF, particularly its pedagogical potential and interaction with learners' affective and motivational characteristics, is warranted.

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