

## Is Less Really More? The Case for Comprehensive Written Corrective Feedback

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Résumé de l'article

Une question sous-explorée, et qui pourtant a des implications potentiellement profondes pour la pratique de la rétroaction corrective à l'écrit (RCE), est de savoir s'il faut corriger un large éventail d'erreurs (correction compréhensive) ou se concentrer sur quelques types d'erreurs (correction ciblée) lors de la rétroaction corrective des écrits des apprenants d'une langue seconde. Malgré des preuves limitées, il est fait valoir que la RCE est non systématique, inconsistante, déroutante et intimidante ; qu'elle peut cognitivement et affectivement submerger les apprenants d'une seconde langue ; qu'elle peut faire décroître l'attention portée à la RCE. Ceci tente de répondre et de remettre en question ces arguments, et bien d'autres, qui s'élèvent contre la RCE compréhensive, tout en apportant des arguments contre la RCE ciblée. Je m'appuierai sur les théories dominantes de l'acquisition des langues et sur les résultats de recherches empiriques pour soutenir les réfutations et les arguments avancés. Des suggestions concrètes seront apportées afin d'aider les enseignants à exploiter pleinement le potentiel de la rétroaction corrective compréhensive.

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## **Is Less Really More? The Case for Comprehensive Written Corrective Feedback**

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### **Abstract**

An underexplored question, and one with potentially far-reaching implications for the practice of written corrective feedback (WCF), is whether to mark a wide range of errors (comprehensive feedback) or to focus on a few error types (focused feedback) in learners' L2 writing. Despite limited evidence, it is argued that comprehensive WCF is unsystematic, inconsistent, confusing, and intimidating; can cognitively and affectively overwhelm L2 learners and may dilute attention to WCF. This paper aims to first respond to and call into question these and other arguments against comprehensive WCF, and then it puts forward some arguments against focused WCF. In doing so, it draws on dominant SLA theories and empirical research findings to lend support to the rebuttals and arguments. Some concrete suggestions are made to help teachers fully exploit the potentials of a comprehensive feedback approach.

### **Résumé**

Une question sous-explorée, et qui pourtant a des implications potentiellement profondes pour la pratique de la rétroaction corrective à l'écrit (RCE), est de savoir s'il faut corriger un large éventail d'erreurs (correction compréhensive) ou se concentrer sur quelques types d'erreurs (correction ciblée) lors de la rétroaction corrective des écrits des apprenants d'une langue seconde. Malgré des preuves limitées, il est fait valoir que la RCE est non systématique, inconsistante, déroutante et intimidante ; qu'elle peut cognitivement et affectivement submerger les apprenants d'une seconde langue ; qu'elle peut faire décroître l'attention portée à la RCE. Ceci tente de répondre et de remettre en question ces arguments, et bien d'autres, qui s'élèvent contre la RCE compréhensive, tout en apportant des arguments contre la RCE ciblée. Je m'appuierai sur les théories dominantes de l'acquisition des langues et sur les résultats de recherches empiriques pour soutenir les réfutations et les arguments avancés. Des suggestions concrètes seront apportées afin d'aider les enseignants à exploiter pleinement le potentiel de la rétroaction corrective compréhensive.

## Is Less Really More? The Case for Comprehensive Written Corrective Feedback

### Introduction

Written corrective feedback (WCF) studies have made significant progress in answering questions surrounding its effectiveness, and the focus of inquiry has shifted from whether WCF is effective to how it can be practiced for optimal results (Bitchener, 2019). While the controversies fueled by Truscott (1996) around its effectiveness have to a large extent settled, new debates have emerged, mainly on the scope of corrective feedback (CF) (Liu & Brown, 2015). Some studies have investigated the effectiveness of focused written corrective feedback (FWCF), which entails the provision of CF on one or two error types (e.g., Benson & DeKeyser, 2019; Bitchener, 2008; Li & Rowshan, 2019), whereas others have examined comprehensive, unfocused written corrective feedback (henceforth CWCF), which involves targeting a wide range of errors and as many as twenty error types (e.g., Bonilla López et al., 2018; Ferris & Roberts, 2001; Nicolás-Conesa, et al., 2019; Van Beuningen, et al., 2012). However, there have been only a handful of studies that compared the differential effects of these two approaches (e.g., Frear & Chiu, 2015; Mohammad Rahimi, 2019), and the findings are notoriously inconclusive. Despite divergent findings, the advocates of each approach, drawing on SLA theories and pedagogical rationale, have discussed, albeit only in passing and incoherently, why one approach is more effective than the other, with the exception of Lee (2019) whose paper addresses these arguments in depth. She critically examined the two approaches, made a case for FWCF by arguing that ‘less is more’ and castigated the practice of CWCF. The present paper critically reviews and revisits the arguments for and against both approaches, made by Lee and other prominent L2 writing researchers (e.g., Bitchener & Ferris, 2012; Ellis, 2009a; Sheen, 2007), and then it will draw on dominant SLA theories, mainly processability theory, skill acquisition theory, and sociocultural theory, as well as the findings of recent empirical studies to, unlike Lee, make a case for CWCF and highlight some of the shortcomings of FWCF. To this end, four of the most reiterated and fundamental arguments against CWCF will be briefly discussed and then refuted using rebuttals on theoretical and pedagogical grounds. Then, in Argument 5, I will discuss the issues regarding FWCF. In the final section, some recommendations will be given to better exploit the affordances of CWCF.

### Defining the Constructs

Before critically analyzing the arguments, it is imperative to clarify some nebulous terms in the conceptualization of focused and comprehensive feedback, also referred to as selective and unfocused feedback respectively, which has sparked some confusion (Lee, 2020).

Both “unfocused WCF (UWCF)” and “comprehensive WCF (CWCF)” have been defined similarly: Ellis (2009a) refers to the former as an attempt to “correct all of the students’ errors” (p. 102), and Lee (2019) defines the latter as a way to “respond to all written errors” (p. 524). UWCF has also been defined as correction provided to a wide range of errors and not necessarily all (Ellis et al., 2008; Sheen et al., 2009). However, some researchers and practitioners tend to use only the term “UWCF” (e.g., Bitchener &

Knotch, 2008; Ellis, 2009a; Ellis et al., 2008; Frear & Chiu, 2015; Kang & Han, 2015; Pawlak, 2014; Sheen, 2011; Sheen et al., 2009; Suzuki et al., 2019), while others use both “CWCF” and “UWCF” interchangeably (e.g., Bitchener & Ferris, 2012; Bitchener & Storch, 2016; Bonilla López et al., 2018; Karim & Nassaji, 2020; Nicolás-Conesa et al., 2019; Stefanou & Revez, 2015; Van Beuningen et al., 2012). A few researchers (e.g., Lee, 2019) use only CWCF.

As for the definition for FWCF, also referred to as selective, both Lee (2019) and Ellis (2009a) define it as responding to errors selectively and targeting specific error types. Bitchener and Ferris (2012) define it as “intensive feedback on one or a few linguistic error categories” (p. 103), which corresponds to the definitions proposed by Ellis et al. (2008) and Sheen et al. (2009). Lee (2020), however, refers to such intense feedback as highly selective/focused (p. 3).

It might appear at first sight as though CWCF and FWCF were clearly distinct, yet, indeed, there is a fine line between the two, which has been misleading. In other words, CWCF and FWCF are not as dichotomous as asserted in the previous studies. The ambiguity can be traced back to the lack of consensus over the definition of error category or type. An error type/category can be interpreted as a single linguistic structure like *definite articles*, or an overarching term like *determiner*, which embodies a multitude of smaller categories such as *articles*, *possessives*, *demonstratives* and *quantifiers*, each of which, in turn, involves smaller grammar structures. Does the fact that “determiner” is only one error type make CF focused, or is the feedback unfocused/comprehensive because it entails feedback on many subcategories? Does the act of selecting to target some error categories, for example *treatable* (i.e., rule-governed errors) vs. *untreatable* errors (i.e., idiosyncratic and less rule-governed), make the feedback approach selective/focused despite the fact that within each of these umbrella terms, there are a wide range of smaller error types? Here is an example of ambiguity caused by inconsistent terminology. Ferris et al. (2013) refer to a study done by Van Beuningen et al. (2012) as focused, presumably, because it has preselected some specific error types to focus on, while the authors themselves conceive of their own CF practice as comprehensive/unfocused, on the grounds that they aimed to correct many error types. To prevent this, for FWCF, Lee (2020) suggests not adopting a very broad error type that encompasses many smaller components because it can change the scope.

Against this background, there have been two studies that have attempted to clarify some of the confusion regarding terminology. Li and Vuono (2019) have recently made an attempt to explain the distinction between “selective” and “focused” on the one hand and “unfocused” and “comprehensive” on the other hand. FWCF, as they explain, involves giving feedback on only one category (e.g., articles); however, within this category, one can opt to correct all errors (comprehensive) or only some of them (selective), a decision driven by perhaps instructional or theoretical motives. The same distinction holds for CWCF which targets many error types, but within each, all or some errors can be marked. Therefore, feedback can be focused/unfocused and at the same time either selective or comprehensive, and according to Li and Vuono, these terms should not be considered interchangeable. Lee (2020), however, believes that the term focused WCF “can be used interchangeably with “selective WCF” because when WCF is focused it is selective, and when it is selective it is also focused—focusing on certain error types or errors” (p. 3). As for the term used when targeting all errors, she promotes the use of CWCF and believes that the term unfocused “should not be used synonymously with comprehensive WCF as

unfocused WCF need not be comprehensive in scope (p. 3). Since Lee's arguments form the basis for this paper, I have adopted the same terminology.

In this paper, selective/FWCF (henceforth, FWCF) refers to the correction given to one or a few specific errors in a selective manner, whereas CWCF is targeting all or a wide range of errors. Since the gap between the two ends of the continuum can be too much, following Liu and Brown (2015), I will adopt the term mid-focused to refer to targeting 3-6 error types. The mid-focused could involve four separate structures (e.g., articles, possessives, demonstratives and quantifiers), or it could entail one overarching error type (e.g., determiner) that contains four structures. These numbers, as Lee (2020) notes, are intended to signal the mid-range scope and are used only for the sake of more clarity because, in the literature, studies focusing on as few as three error types (e.g., Bitchener, Young, & Cameron, 2005) and those targeting as many as 12-20 types (e.g., Nicolás-Conesa et al., 2019) have been referred to as unfocused, which can be misleading.

### **Arguments endorsing CWCF and dismissing FWCF**

In what follows, I will present four different arguments against CWCF along with rebuttals, and then in Argument 5, I will put forward some arguments against FWCF.

***Argument 1: When CWCF is given, some of the corrections will inevitably be beyond learners' current stage of development, and, according to processability theory, these corrections are not learnable, manageable, or helpful (Lee, 2019, p. 526).***

To rebut this claim, it is necessary to first revisit the tenets and constructs of processability theory (PT). PT (Pienemann, 1984, 1989; Pienemann & Lenzing, 2015) is a speech processing approach positing that there are some general stages of acquisition that determine the order of structures needed to be learned before moving to the proceeding ones. To process the linguistic rule at stage 3, for instance, one would need to be competent at the stages leading up to it, otherwise, all efforts, including formal instruction, can be futile since the language processor cannot handle it. Closely related to this hypothesis is the teachability hypothesis (Pienemann, 1984) which states that formal instruction can be conducive to learning only if the target structure is one stage higher than the learner's current interlanguage stage. All the developmental stages, as Pienemann and Lenzing argue, build upon each other hierarchically, and therefore no stage can be steered or skipped, not even with the learners being inundated with input or undergoing ample, arduous practice. Does PT predict that some portion of CWCF, particularly the ones that are supposedly beyond the learner's current stage, is in vain? Lee (2019) asserts that it does. What follows is an attempt to suggest otherwise.

PT is a theory of oral language and not writing (Pienemann, 1989; see also Polio, 2012a), explaining why for Pienemann, acquisition is characterized as automatic and effortless retrieval of information, which predominantly draws on implicit knowledge (Ellis, 1993b). The emphasis attached to automaticity lies in the fact that resorting to declarative (knowledge of rules) and explicit knowledge in real-time and fast-paced oral communication fails to yield fluent production of utterances mainly because conscious processing demands much time. Even though PT does not explicitly deal with explicit/implicit knowledge, it can be inferred from its advocates' works (e.g., Pienemann

& Lenzing, 2015) that they only reject the possibility of developing implicit knowledge when receiving instruction on linguistic structures that are beyond the interlanguage system, but they do not dismiss the possibility of developing explicit knowledge for these structures. Pienemann (1984) argues that “although a structure from stage  $x$  can successfully be instructed at stage  $x-2$ , thus seemingly short-cutting the ‘natural’ order of acquisition, this learning cannot result in the actual use of the structure in normal speech” (p. 206). This clearly shows that he does not dismiss the role of instruction for these structures altogether, instead rightly argues that such instruction only translates into a kind of knowledge/learning which is inherently not compatible with the use of language in normal speech. To me, the knowledge Pienemann is describing is explicit and declarative (Anderson, 2007). To lend support to this claim, I shall draw on Pienemann’s (1989) study where he found that irrespective of the developmental stage, all the learners did learn the formal learning tasks; nevertheless, “only learners already at Stage  $X + 2$  *transferred* [emphasis added] this ‘knowledge’ to their actual speech production” (p. 60). This elucidates that learners, even those receiving instruction on linguistic forms beyond their current developmental stage, developed explicit knowledge, but such knowledge was inadequate when applied to speaking because oral production requires language processing in real-time.

Ellis (1993b) accepts Pienemann’s processability theory in that for implicit knowledge to develop, the target structure needs to be learnable and within learners’ grasp; however, he asserts that explicit knowledge can be developed for any grammar rules regardless of the stage learners are in and that most explicit knowledge is learnable (Ellis, 2009b). He notes that “learners can develop a conscious understanding of grammatical rules in more or less any order—although it might be easier for them to handle some rules before others . . .” and this can be done “irrespective of whether they are ready to integrate them into their developing interlanguage systems” (Ellis, 1993a, p. 72). Polio (2012b) also acknowledges that learners go through developmental stages, especially for morphosyntactic structures, but casts doubt on whether this can be applied to writing and suggests the possibility that “in writing tasks, learned rules would overtake processing constraints” (p. 379). It is well-attested that explicit knowledge per se cannot fulfil the requirements of oral communication primarily because what underlies the skill to use linguistic structures fluently is proceduralized, implicit knowledge (Ellis, 1993b), but does this mean that explicit knowledge cannot be drawn upon for other activities requiring less on-the-spot processing and with more time to process, such as revision and self-correction or even untimed writing?

In this regard, Polio (2012a) argues that “even those approaches that consider the role of explicit knowledge to be minimal in oral acquisition cannot deny some role for explicit knowledge in learning to write” (p. 325). Pienemann and Lenzing (2015, p. 177) argue that “explicit knowledge comes into play through monitoring”, which is reminiscent of Krashen’s (1982) Monitor Model that also views explicit knowledge as beneficial when learners have time to reflect and are focused on accuracy. It seems that there is a general consensus on the usefulness of explicit knowledge for monitoring purposes if there is plenty of time for cognitive processing (Ellis, 2009b). It is obvious that speaking and writing differ fundamentally in this regard. Williams (2012) asserts that, as opposed to speaking, writing is less time-constrained and is permanent, which has important implications. When writing or reflecting on WCF, these two affordances enable learners to

(1) resort to their explicit knowledge (Bruton, 2009), (2) better notice the gap in their interlanguage, (3) focus on form, (4) make cognitive comparisons, and above all (5) use their cognitive resources to write more accurately (Bitchener & Storch, 2016; Manchón, 2011).

To summarize, of all the CWCF that learners receive, depending on their proficiency level, hypothetically, some might be learnable and processible, which can be incorporated into the interlanguage system; this is what both the proponents and opponents of CWCF tend to agree upon. What sets them apart is that the advocates of FWCF claim that CF on error types which “fall beyond students’ readiness” (Lee, 2019, p. 526) is unhelpful. As far as these error types are concerned, it is possible that the information learners gain through CWCF is stored in a form of “metalingual representation” as explicit knowledge (Ellis, 1993a, p. 70). If stored as explicit knowledge, it can be an asset, especially in writing and the processing of CF, because it can be drawn upon to form *monitored output* which, in turn, acts as input for the development of implicit knowledge (Robinson et al., 2012). In addition, explicit knowledge of a linguistic structure increases the likelihood of learners’ *noticing* when encountering the structure in new input (N. Ellis, 1994). The other possibility is that, as the advocates of FWCF claim, the CF given is forgotten. In this regard, Larsen-Freeman (2003) notes that despite attrition, the exposure may store some trace of the structure that will help learners to process the structure more deeply at a later encounter (Larsen-Freeman, 2003). There is also a possibility that the knowledge gained from the CF stays dormant and is activated later, a phase which Gass (2003) refers to as the *incubation period*. Similarly, the attrition can be explained by the delayed-effect hypothesis (Lightbown, 1985) which suggests that the effects of pedagogic intervention can emerge after some time and possibly after more CF interventions.

***Argument 2: Our information processing system is limited, and thus CWCF, due to targeting many errors, can lead to cognitive overload and in turn failure in noticing and uptake (Bitchener, 2008; Ellis et al. 2008; Lee, 2019; Sheen, 2007). Even if learners become accurate as a result of such feedback, due to the limited attentional resources, it would be at the expense of complexity and fluency in writing since the cognitive resources are channelled towards accuracy (Truscott, 1996).***

It is well-established that the human information processing system has limited capacity for processing and responding to information (Robinson et al., 2012), and this is evident when fulfilling tasks with varying cognitive demands, with some draining the cognitive resources more than others. It is also obvious that CWCF entails significantly more information for learners to attend to. The opponents of CWCF (e.g., Bitchener, 2008; Ellis et al., 2008; Lee, 2019; Sheen, 2007) claim that this hinders the processing and internalization of the CF, and to back their argument, they mainly refer to the notion of *limited attentional resources*, also known as the *trade-off hypothesis*, put forward by Peter Skehan who argues that because of the limited nature of attention, focusing on one aspect of language would be at the expense of others and to the detriment of noticing (Skehan, 1998). Applying this to CWCF implies that some of the feedback is not processed by learners due to cognitive overload, and even if they become more accurate after some feedback sessions, other aspects of their writing, for instance, fluency and complexity,

would be compromised because learners would be obsessed with accuracy (Truscott, 1996).

It needs to be borne in mind that Skehan made these arguments mainly for oral skills and not writing (Polio, 2012a). However, a fairly large body of research (e.g., Hartshorn et al., 2010; Nicolás-Conesa et al., 2019; Van Beuningen et al., 2012) has shown that improvement in accuracy does not lead to decrements in either fluency or complexity in writing and that learners are able to handle the attentional demands of CWCF (Bonilla López et al., 2018). Van Beuningen et al. (2012), for instance, in a carefully designed experimental study with 268 participants, found that CWCF was effective in reducing both grammatical and nongrammatical errors, without negatively affecting the syntactic or lexical complexity. With regard to uptake, CWCF studies that require participants to make revisions, which is an indication of uptake (Manchón, 2011), have shown that despite receiving CWCF, learners are able to revise (e.g., Ferris & Roberts, 2001). Frear and Chiu (2015), comparing the effect of CWCF with FWCF, found that the unfocused group, despite receiving substantially more corrections, had equal noticing and uptake levels, indicating that, unlike Sheen's (2007) claims, learners did not experience attentional strain. Skehan's (1998) model is not the only psycholinguistics hypothesis in this respect. Robinson (2003) proposed a competing theory, referred to as the *cognition hypothesis*, which, unlike the trade-off hypothesis, posits that no compromises need to be made and that increasing complexity "promotes more vigilant monitoring of output" which can translate into "increased noticing and improved uptake" (Robinson et al., 2012, p. 255). Putting these two hypotheses into testing in L2 writing, several studies have found partial results supporting Robinson's arguments (e.g., Frear & Bitchener, 2015; Kuiken & Vedder, 2008). Very recently, though, Muhammad Rahimi (2019) found evidence supporting both models. The discrepancies show that further inquiries are warranted along this strand of research, and therefore these theories cannot be drawn upon to either support or question CWCF.

To better understand whether CWCF might be overwhelming, one should also consider what proportion of the feedback learners receive contains entirely new information. Do all errors stem from lack of knowledge? If so, is knowledge a matter of all or nothing—one either has it or lacks it (i.e., dichotomous)—or does the notion of partial knowledge exist (i.e., a continuum)? Skill acquisition theory as well as sociocultural theory (SCT) can shed light on these queries. According to the former, adult learners in instructional settings move through three main stages when learning linguistic structures, starting from declarative knowledge (i.e., they know the rule), moving to procedural (i.e., they know how to use the structure but only consciously and slowly and not always accurately), and finally, after ample and arduous practice, they reach automaticity that entails effortless and accurate use of a linguistic structure (Anderson, 2007). Moving from the first stage, which is not very robust, to the second is fast; nonetheless, automatization is gradual and slow (DeKeyser, 2015). Most errors occur during the first two stages where task execution is slow (needs more reaction time), and knowledge is not fine-tuned. Therefore, depending on learners' proficiency level, a portion of feedback is probably aligned with their declarative or procedural knowledge, which possibly imposes less demand on central attentional resources. Simply put, some of the information they receive through CWCF is what they already know in the form of a rule (declarative) and maybe even the usage (procedural), but since their knowledge is not automatic yet, they do not use



the structure correctly. This can reduce cognitive load especially for the structures that are proceduralized because they do not require the information to be retrieved in bits and pieces, rather it is done in chunks (Anderson, 2007).

The view of knowledge as a continuum and abilities as malleable is also shared by SCT even though it is epistemologically and ontologically distinct from the cognitive-interactionist view discussed above. To Vygotsky (1998), of all skills, some are fully internalized (matured), which can be done independently (i.e., self-regulated), others are in a maturing phase (in varying degrees), which can be fulfilled only with assistance (i.e., object-regulated and other-regulated), and of course, there are the ones not internalized at all (Swain et al., 2011). Accordingly, for some errors, learners require very implicit assistance, as little as simply being notified of an error, while for others, they need very explicit help, which may be the provision of the correct form plus explanation (Nassaji & Swain, 2000; Poehner & Leondjev, 2020). It can be argued that the maturing skills may not demand heavy cognitive processing.

Theoretically speaking, CWCF is less likely to cognitively overwhelm intermediate and advanced learners given the declarative knowledge they possess for most structures and the fact that the time constraints are not as pressing as in speaking. Written input, has, in fact, been shown to be processed more easily than oral (Wong, 2001). However, this issue still merits further research, especially for less proficient learners.

***Argument 3: CWCF is unsystematic, inconsistent, and confusing (Sheen et al., 2009, p. 567), which, according to cognitive processing models, might lower learners' comprehension and intake of the input (Lee, 2019 p. 527). It is not a suitable mediational tool from an SCT perspective either because it provides too much assistance, which is against learner autonomy (Lee, 2019, p 529).***

To substantiate the claim that CWCF can be confusing and therefore not a suitable mediational means, Lee (2019, 2020) draws upon the computational framework (Gass, 1997), some empirical studies (e.g., Frear & Chiu, 2015; Mohammad Rahimi, 2019; Sheen et al., 2009) as well as some tenets and underlying premises of SCT. In the following paragraphs, I will respond to them in the order presented.

Gass (1997) proposed a comprehensive cognitive processing model to explain the stages involved in the processing of explicit input, starting from the registration of input to being able to incorporate it into output in the last stage. Drawing on this model, Bitchener and Storch (2016) and Bitchener (2019) explain the stages involved in the processing of CF, which are *noticing, comprehension, intake, integration, and output*. Lee (2019), among others (e.g., Ellis et al., 2008; Sheen et al., 2009), argues that since FWCF draws learners' attention to a few error types, learners are more likely to notice and comprehend them, which are the essential prerequisites for learning. However, Gass does not predict whether attending to a wider range of input interferes with noticing and/or comprehension. Bitchener (2019), in his lengthy discussion of the requirements of cognitive engagement and comprehension of CF, does not mention the scope of error correction as a moderating factor influencing comprehension or intake of CF. As mentioned in the previous section, despite receiving CWCF, learners have been shown to be able to "notice" the corrections they receive (Ferris & Roberts, 2001). The argument that correction of a wide range of errors can negatively affect comprehension is untenable because comprehension is

contingent upon, on the one hand, the explicitness of the CF and, on the other hand, on learners' knowledge stored in the long-term memory which, in turn, is determined by the proficiency level (Bitchener, & Storch, 2016). For instance, if the WCF is implicit (e.g., indirect feedback that only detects the error), only learners who have partial knowledge of that target structure are likely to understand the feedback, and thus comprehension has little to do with the scope of CF. For intake to happen, learners need to match and make comparisons between their existing knowledge, which is retrieved from long-term memory, and WCF input (Bitchener & Storch, 2016). This is done in working memory, and the mediating factors are working memory capacity and aptitude (e.g., language analytic ability). Thus, individuals with varying working memory capacity (WMC) or aptitude tend to perform differently when receiving feedback because their levels of intake can be different. The level of intake, nevertheless, might not be determined by the scope of CF—whether it is CWCF or FWCF—as much as it is by differential levels of aptitude and WMC. Learners receiving FWCF have been shown to have different intake levels due to varying WMC and aptitude. In fact, all studies that measure the mediating effects of WMC (Li & Rowshan, 2019) and aptitude (e.g., Benson & DeKeyser, 2019; Sheen, 2007) have been of focused nature, and, to the best of my knowledge, there have been no studies investigating whether individuals with different WMC and aptitude respond better if they receive FWCF as opposed to CWCF. It might be that the large scope of WCF affects the levels of intake. What stands to logic, though, is that compared to speaking, in writing, WMC has a less significant role (Kormos, 2012; Williams, 2012) since learners have more time to process the input. Still, this issue merits more investigations.

The findings of empirical studies on the respective roles of CWCF as opposed to FWCF on L2 development are far from conclusive. Four studies have compared the effectiveness of focused vs. comprehensive feedback (Ellis et al., 2008; Frear & Chiu, 2015; Mohammad Rahimi, 2019; Sheen et al., 2009). The study by Ellis et al. did not find any significant differences between the two approaches, while Sheen et al. found results favouring FWCF. These results, however, should be interpreted with caution due to the methodological issues raised against both studies (see Bruton, 2009; Xu, 2009). More recently, Frear and Chiu (2015) reported that “there were no observable differences between the focused and unfocused groups in either the analysis of weak verbs or the investigation of total accuracy” (p. 33). What this study fails to show is how the accuracy levels of CWCF/unfocused participants changed for the error types that they had received feedback in addition to the FWCF group. A study that kept track of the changes for all error types for the CWCF group was Mohammad Rahimi's (2019). In this study, one group received focused (two categories) and the other CWCF (with five large categories). Regarding the error categories that were shared between the two groups, the focused group outperformed the CWCF, which apparently lends support to Lee's (2019) arguments. However, the CWCF group managed to significantly reduce their errors in four out of five categories and therefore had significantly more overall accurate essays. The author concluded that even though correcting “all errors rather than just a certain (important) subset of them entails sacrifices in its effectiveness for that subset, . . . correcting all the students' errors and requiring them to revise their writing can help them improve their overall written accuracy” (p. 18-19). More longitudinal studies can shed light on whether by continuing CWCF, the accuracy of that subset will also improve or not.

Finally, Lee (2019) argues that CWCF is at odds with the principles of SCT theory, and to back up her claim she cites Lantolf and Thorne (2006) and notes that “too much assistance (e.g., through CWFC) can be counterproductive and stymie development” (Lee, 2019 p. 529). It is true that following Vygotsky, the advocates of SCT urge teachers/mediators to provide fine-tuned, individualized feedback in one-on-one oral conferences, where the mediator is discouraged from providing too much assistance (Storch, 2018; Swain et al., 2011). What is ignored in this argument is that “too much assistance” refers to the explicitness of mediation, not the amount. In other words, when giving feedback, mediators should not simply provide explicit corrections and instead should delegate maximum responsibility to learners (Poehner, 2008) and make corrections only when the students fail to self-correct despite receiving clues. Therefore, “do not give too much assistance” in SCT means “do not do the learning for the students and help them become autonomous”, and it does not mean “do not mediate for a wide range of errors”. As long as assistance is graduated (neither too explicit nor too implicit) and contingent (i.e., responsive to the dynamic needs of learners), it can be effective (Storch, 2018), and this is not related to the scope of WCF. This is evident in WCF studies conducted in SCT paradigm (e.g., Nassaji & Swain, 2000) and dynamic assessment (Poehner & Leontjev, 2020) where the mediator initially provides only implicit feedback and clues and depending on the learners’ responsiveness, moves to more explicit ones. This technique can be applied to a wide range of or all errors, and since learners are provided with implicit feedback, they still need to self-correct, which can instil learner autonomy and self-regulation skills.

***Argument 4: Too much feedback is intimidating, demotivating, and discouraging for learners (Bitchener & Ferris, 2012; Lee, 2019; Lee et al., 2018; Truscott, 2001).***

Learners are likely to be demotivated and disheartened to see that their essays are inundated with WCF. This is an argument put forward by some researchers (e.g., Ellis et al., 2008; Ferris & Hedgcock, 2014; Lee, 2019; Sheen, 2009) and to some extent endorsed by empirical research findings (e.g., Mahfoodh, 2017; Yu et al., 2020; Zacharias, 2007). However, such generalization should be interpreted with caution since the first group of studies only make assumptions and do not examine the emotional responses to WCF, and the second group of studies examine learners’ perception of WCF in general and not the learners’ emotional responses to comprehensive vs. focused feedback. For example, Mahfoodh (2017) and Zacharias (2007) reported that students felt discouraged when almost every single word was crossed out, and they received too many comments. Despite the negative emotional responses, learners in Mahfoodh’s study successfully used the WCF, and those in Zacharias’s acknowledged the importance of WCF. With respect to the negative emotional responses, as noted by Dörnyei, (2009), an intricate network of environmental and temporal factors is at play. The feeling of discouragement among learners in these two studies should not be attributed to solely the fact of receiving a lot of feedback; it could be, as the authors also acknowledged, due to vague, unspecific feedback as well as unfamiliar error codes students received through CF. In addition, whether students are discouraged by CWCF could be mediated by individual factors such as proficiency level, beliefs, age, and overall motivation level as well as contextual factors (e.g., the teacher, the context, even the institution) (Ferris et al., 2013). Learners who are

not intrinsically motivated, or as Radecki and Swales (1988) call them, the resisters, view revision as punishment, and are not motivated to write or engage with the feedback regardless of the feedback type (Zhang & Hyland, 2018). Learners lacking motivation to write tend to show reluctance to CF and revision in general, and it is possible that they get demotivated even if they are given FWCF. This is evident in the following studies. In a study with 1395 secondary level participants in Hong Kong, Lee et al. (2018) found that learners lack motivation to write in English, and Lee (2008) attributes this lack of motivation to the time pressure associated with submitting a single draft rather than multi-drafts and recommends adopting a process-oriented feedback approach, whereby learners are given several opportunities to make revisions and attend to the teachers' feedback before submitting the final draft. Yu et al. (2020), which has also been conducted in Hong Kong, used this process-oriented approach and found that learners still felt discouraged and demotivated. Multi-drafting affords learners to focus on a few errors on the first drafts, but still, learners were discouraged and disengaged with L2 writing. This can indicate that learners' aversion to WCF might not be because of CWCF but rather due to their apathy towards writing in general.

Some of the arguments against CWCF originate from misconceptions. Yu et al. (2020) reported that while WCF demotivated and discouraged learners, peer and self-correction were conducive to more motivation. Based on this finding, they concluded that as Lee (2019) also recommends, teachers should avoid CWCF. What is overlooked here is that CWCF and peer feedback are not mutually exclusive; one could have peers attend to all error types they can find in each other's essays. Other arguments against CWCF are not backed by empirical studies. Among others (e.g., Sheen et al., 2009), Lee (2019) claims that "for students, receiving papers flooded with the red ink is overwhelming, confusing and discouraging (2019, p. 525), a claim that has been rejected by the two studies which investigated this issue (Hedgcock & Lefkowitz, 1996; Leki, 1991).

The studies discussed so far set out to highlight the negative emotional responses caused by corrective feedback; however, there is even a larger body of research that shows that learners expect to receive WCF due to its perceived usefulness (e.g., Ferris, 1995; Montgomery & Baker, 2007) and specifically CWCF (Ferris & Roberts, 2001; McMartin-Miller, 2014), and that it not only does not demotivate them (Oladejo, 1993) but on the contrary, without it they feel anxious and lose confidence in their teachers (Ferris & Hedgcock, 2014; Leki, 1991). Providing FWCF in such instructional settings where the majority of students prefer to receive CWCF can be demotivating for students. In fact, learners in many contexts have been shown to expect teachers to provide CWCF (Ferris & Roberts, 2001; Lee, 2008, Leki, 1991). Therefore, it can be argued that if they receive FWCF, there will be a mismatch between what learners believe as valuable, and what they receive. Students' response to feedback is driven by their goals and beliefs (Bitchener & Storch, 2016), and if they do not see value in what is done in their class, they might get demotivated, which in turn might jeopardize the achievement of the instructional goal. As Ferris (2003) argues "ignoring students' wishes about error feedback may lead to frustration (due either to expectations from prior educational experiences or to learning style needs), anxiety, decreased motivation, and a corresponding loss of confidence in their writing instructors" (p. 141).

The discrepancies between these two groups of studies point to the fact that motivation is affected by many factors, and it would be oversimplifying to attempt to show

all learners, regardless of the contextual and individual factors, would be demotivated by CWCF, as claimed by studies mentioned above (e.g., Lee, 2019; Mahfoodh, 2017; Yu, et al., 2020). Motivation ebbs and flows in a dynamic system and unlike what has traditionally been perceived, motives do not exert “a linear effect on action... [to be] captured quantitatively by means of correlation-based analyses. Their push or pull is interfered with by a multitude of other pulls and pushes” (Dörnyei, 2009, p. 210). To conclude whether CWCF is demotivating, studies need to adopt comparative designs which can tap into learners’ perceptions of CWCF vis-à-vis FWCF, with a consideration of a range of individual and contextual factors.

***Argument 5: “When CWCF is fraught with problems, a natural alternative is to go for less teacher WCF – that is, FWCF” (Lee, 2019, p. 526) and selective correction (Truscott, 2001).***

In order to rebut this claim, I will first explain how the practice of FWCF tacitly assumes a discredited behaviourist and/or structuralist model, and then, I will discuss its shortcomings if adopted by either teachers or researchers. The proponents of FWCF (e.g., Lee, 2019) argue that only one or a few error types should be targeted at a time, and it should be based on the instructional syllabus (Pawlak, 2014) because this way learners receive CF on structures they have studied or can manage to learn, which can reinforce and consolidate learning (Sheen et al., 2009). This way, “over time all the major grammar items will be covered in teacher WCF” (Lee, 2019, p. 529). In other words, the gradual and incremental accumulation of knowledge of structures will make up the whole knowledge. This, in my view, is a retrogressive approach which is promoting a *structural syllabus* wherein language is broken into discrete parts and sequenced in a linear fashion to be taught separately, and the accumulation of these is tantamount to the acquisition of the whole system (Long & Robinson, 1998; Wilkins, 1976). This lies at the heart of *focus on formS* approach (Long & Robinson, 1998) in which “at any one time the learner is being exposed to a deliberately limited sample of language” (Wilkins, 1976, p.2). Such theoretical perspective has been subjected to fierce criticism on different levels (see Long & Robinson, 1998) largely because language acquisition is not the sum of all rules in a predictable manner. As Long and Robinson note, progress is not unidirectional or linear; there could be phases where the learner does not make much progress or even retrogresses. It is noteworthy that the advocates of adopting a selective approach to CF (e.g., Lee, 2019; Sheen et al., 2009) do not directly endorse a structural syllabus or focus on formS approach; however, their arguments and rationale are in line with the basic tenets of these approaches. It is not only the cognitive-interactionists who reject such conceptualization of development. The sociocultural perspective also conceives development as non-linear and posits that learner trajectory is not a smooth and incremental transition but a revolutionary process (Poehner & Leontiev, 2020). It is evident that both of these dominant SLA theories reject such a view of language development, which underlies the practice of FWCF.

The second issue is regarding the implementation of FWCF. Teachers can implement focused and mid-focused WCF in two ways: (1) give intensive feedback on only one error type for a number of sessions to ascertain the error is not repeated, referred to as *immediate mastery* or at the same time give CF on a number of error types (e.g., four

learnable types), known as *gradual mastery* (Ellis, 1993b). Both are impractical because determining what is within learners' grasp neither has psycholinguistic validity (Ellis, 1993b) nor is it backed by rigorous empirical evidence. As Ellis cogently argues, it would be a "hit-or-miss affair" because it would be onerous to ascertain that the target language is aligned with the individual learners' "internal syllabus" (p. 103). Also, linguistic items cannot be treated as separate and discrete, while in actuality they are interdependent and inextricably interwoven.

As far as research is concerned, FWCF has been the method of choice for many researchers (e.g., Bitchener, 2008) who used it in strictly controlled laboratory designs to examine the effectiveness of CF with varying levels of explicitness on the L2 development of a single target structure. These studies have been questioned on several grounds, but the main impetus behind the arguments against these studies has been related to their scope being too narrow, which can jeopardize their generalizability and ecological validity (see Bruton 2009; Xu, 2009). This led many, including Lee (2019, p. 523), to urge researchers to conduct more classroom-based and longitudinal studies on FWCF, which are scarce. I believe the dearth of such studies on FWCF can be contributed to their feasibility issues. To conduct such a study in an authentic classroom, one would need to deny the students WCF on a wide range of errors for an extended period of time. All CF learners would receive between the pretest and the final delayed posttest on their essays would be on one or a few grammatical errors. It is undeniable how frustrating, demotivating and even unethical it could be for the students, especially in the light of the evidence proving the effectiveness of CF in general and CWCF in particular (e.g., Bonilla López et al., 2018; Van Beuningen et al., 2012). Another issue with such longitudinal studies is the difficulty in disguising the research focus given the focused and intensive nature of the treatment (Xu, 2009). Bitchener (2012), the most prolific writer on FWCF, acknowledges that since feedback is provided only on one or two error categories, it, especially for the group that receives direct CF, can draw the learners' attention to the target form, and the researcher might not be able to disguise the research focus, especially if the study has a longitudinal design (see Bitchener, 2008 for this problem).

## **Pedagogical Implications**

### **Exploiting the potentials of CWCF**

This section discusses some practical techniques which can potentially address the most reiterated shortcomings of CWCF, which include being time-consuming for teachers and cognitively as well as emotionally overwhelming for learners. CWCF can be time-consuming unless teachers adopt an iterative, multi-draft CF treatment procedure, whereby learners initially consult their peers and exploit online resources such as automated writing evaluation (AWE) tools (i.e., Criterion, Grammarly, MY Access and Pigai) before submitting essays to their teachers. AWE can be effective in reducing most surface-level errors (e.g., spelling and punctuation) in students' writing (Fang, 2010) which account for a large portion of inaccuracies in their writing. Not only does this save teachers' time but also can reduce any potential cognitive load of processing CF in each draft. Another initiative that teachers can take to reduce the excessive workload is to teach techniques to hone learners' revision skills (see Ferris & Hedgecock, 2014 for some techniques), which

can foster autonomy in learners and prevent them from being spoon-fed, especially for careless slips that they can self-correct.

The second criticism levelled against CWCF is that it draws students' limited attention to many corrections, which can arguably reduce its effectiveness. This issue might be mitigated if learners are pushed to process the CF more deeply by using some pedagogical interventions. Evans et al. (2010) designed an instructional method—dynamic written corrective feedback (DWCF)—which entails the provision of CWCF along with error codes. In this method, students are required to use a tally sheet where they keep track of the frequency of errors in each error type indicated by the teacher. It is based on the notion that “if learners do not have anything to do with the feedback”, giving correction can be essentially useless (Polio, 2012, p. 358). Requiring students to write on the tally sheets their mistakes, as well as the correction, can boost learners' noticing, cognitive engagement, and possibly uptake, which in turn might counterbalance the potential, concomitant cognitive overload caused by receiving many corrections (see Kurzer, 2018 for a review of studies on the effectiveness of DWCF). However, it should be borne in mind that “while noticing is empirically supported to be facilitative of subsequent intake and potential learning, there is no hard evidence that all such noticed intake is logically processed further and, indeed, learned or internalized in the internal system” (Leow, 2013, p. 30).

Besides noticing, depth of processing is also important for better retention ( Craik & Lockhart, 1972). If the CF is processed more deeply, it may reduce the rate of attrition which might result from dividing attention to process information regarding a wide range of errors. The highest depth of processing is done when students engage in hypothesis testing, rule formation, and conscious activation of prior knowledge (Leow, 2015). One way to further increase noticing and to encourage the activation of prior knowledge and hypothesis testing is to have learners self-explain and articulate their thoughts by either verbalizing or writing as they reflect on the WCF, a technique referred to as *linguaging* (Swain, 2006). Simply put, learners can be asked to explain the underlying reason for their errors and the corrections they have received. Here is an example of written linguaging. A student reacts to the teacher's correction (a ~~high~~ (huge) amount of money) by writing, “*Oh, I guess I made this mistake because in my first language we say, 'high amount of money', and I translated it into English, but now I know how to say it*”. This technique can make learners engage with the CF, and due to its descriptive nature, may reveal students' depth of cognitive engagement. To encourage deep processing, students can be asked to both use metalanguage to explain their mistakes and repeat the corrected structure in their verbalization (e.g., *here I used the tense 'has gone' which is present perfect. I needed to use simple past 'went' because at the beginning of the sentence I mentioned the time of the action in the past*). Even though linguaging and tally sheets have been shown to increase noticing and cognitive engagement, more studies are needed to find whether such engagement can translate into learning (Cerezo et al., 2019).

As noted above, CWCF is argued to evoke negative emotional responses because students might feel that they are making too many mistakes. Linguaging can arguably bring to the surface learners' emotional responses if learners are encouraged to express their emotional reactions to their mistakes and/or CF. Here is an example: “*I had no idea the past form of 'catch' is 'caught'. Happy to know. Thanks, teacher!*”. This can provide

information regarding individual learners' emotional responses and whether they are feeling demotivated or not by the CWCF so that the teacher can respond accordingly.

### Conclusion

Here is a summary of the arguments I made in this paper. Firstly, processability theory might be applicable more to comprehensive, oral CF than CWCF because in writing learners have more time at their disposal and therefore can tap into their explicit knowledge to process and comprehend CF. Also, to develop declarative and explicit knowledge, which can be drawn upon in writing, learners might not be bound by cognitive processes and might be able to learn linguistic structures in any order. Secondly, while human information processing system is limited, more time afforded in writing is likely to ease off the processing load of CWCF. Also, depending on learners' proficiency, some of the WCF is what they already know declaratively, which in turn can lower the cognitive load. Whether the allocation of learners' attention to CWCF costs them fluency and complexity is still debatable; however, empirical studies so far show that it does not. Thirdly, CWCF is not incongruent with the principles of either cognitive or sociocultural theory. Fourthly, there is little evidence indicating that students find CWCF demotivating, and the studies that address this issue offer an incomplete picture since they make generalizations without taking into account and reporting many individual and contextual factors. Learners have been shown to prefer CWCF over FWCF and failing to meet their expectations can be demotivating. Finally, as far as FWCF is concerned, giving feedback on structures that are learnable is pedagogically impractical, theoretically groundless, and challenging to implement for longitudinal research designs.

Even though this paper argues that CWCF can generate more learning opportunities and practice by encompassing a wider range of errors, further research is needed to establish whether learners can process, understand, and retain the information gained through CWCF better than FWCF. The provision of CF, whether focused or comprehensive, should not be taken as a guaranteed measure translating into noticing, uptake, internalization, and consolidation for all aspects of language in any order by anybody (DeKeyser, 2015). Individuals with varying analytic abilities perform differently, especially under explicit learning conditions (Ellis, 2009b). Teachers should opt to target either a fairly large or a very large number of error types depending upon their specific context, the learning goals, lesson objectives, the nature of the activity, and the learners' proficiency level. At the same time, they should adopt some techniques that require learners to engage more deeply with CF because "if the students are not committed to improving their writing skills, they will not improve, regardless of the type of CF provided" (Guenette, 2007, p. 52).

Although not a fledgling field of research anymore, WCF is still in need of more longitudinal studies conducted in authentic classrooms to make sure it is pedagogically relevant to teachers. Further investigations are required to establish the mediating effects of proficiency level, motivation, working memory capacity, aptitude, age, and beliefs (i.e., teachers and learners) and whether deep cognitive processing of CWCF affect learning and retention. Longitudinal studies that involve several treatment sessions targeting a wide range of errors, both rule-governed and probabilistic structures, conducted in authentic classrooms can shed more light on the effectiveness of CWCF.



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