

## The Role of Written CF in L2 Development

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### Introduction

As a field that “investigates the human capacity to learn languages other than the first” (Ortega 2009:1), SLA is interested in knowing how “to help learners overcome the errors they make in the process of acquiring the target language” (Bitchener and Ferris 2012: 3). Many ESL and EFL teachers provide written corrective feedback (CF) to address errors. On the one hand, composition teachers may provide written CF to help learners edit their work and produce revisions that are free of errors (Bitchener 2012b). On the other hand, language learning teachers may do this to enable learners “acquire specific target-like forms and structures, demonstrated in the writing of new texts” (Bitchener 2012b).

For years, composition teachers and language learning teachers, alike, had assumed that the provision of written CF was effective. This belief was challenged when Truscott (1996) presented a paper arguing for the abandonment of grammar correction in L2 writing classes. The reasons for this argument are “(a) Substantial research shows it to be ineffective and none shows it to be helpful in any interesting sense; (b) for both theoretical and practical reasons, one can expect it to be ineffective; and (c) it has harmful effects” (Truscott 1996: 327).

Truscott’s (1996) claim was met with rebuttals from various researchers (Ferris 1999, 2006, Bruton 2009, 2010, Bitchener and Knoch 2010, Van Beuningen, De Jong and Kuiken 2012). Ferris (1999) counter-argued by saying that Truscott (1996) did not only present evidence that are limited, they, also had methodological flaws in the design and analysis. According to Bitchener et al (2010), Truscott’s (1996) claims do not necessarily have theoretical or pedagogical validity. Van Beuningen et al (2012) posits that the results of their study of secondary school students of L2 Dutch provide counterevidence of Truscott’s (1996) claims. The results showed the efficacy of comprehensive CF in grammatical as well as nongrammatical accuracy during revision and in new pieces of writing, the learners did not avoid complex structures due to error correction, and additional writing practice was not found to be more effective than written CF. Overall, Van Beuningen et al (2012) disagreed with Truscott’s (1996, 1999, 2004, 2007) claims that written CF is not only ineffective but may be

harmful as well. Van Beunigen et al (2012: 36) concluded that “CF is a useful educational tool that L2 teachers can use to help learners improve their accuracy in writing.”

To settle this debate and other issues on the efficacy of written CF in L2 development, Ferris (1999) and other researchers’ call for conducting more well-designed studies that would give valid evidence before making any conclusions on the issue must be heeded.

The purpose of this paper is to provide a critical review of relevant literature on written CF in SLA and evaluate theoretical and empirical findings in this area of research.

I begin this essay by presenting a discussion on the theoretical background that inform written CF. Specifically, I discuss how various theories and hypotheses view the role of written CF in L2 development. These include The Interaction Hypothesis, The Noticing Hypothesis, The Skill Acquisition Theory and The Sociocultural Theory. Next, I discuss the explicitness and comprehensibility of written CF with a focus on direct written CF and focused written CF, respectively. Afterwards, I present and critically evaluate three empirical studies of Bitchener and Knoch (2010), Shintani, Ellis and Suzuki (2014) and Stefanou and Révész (2015). Finally, I conclude this essay by providing a short synthesis and discussion on the empirical studies reviewed and provide recommendations for future research.

## **1. Theoretical perspectives of written CF**

In this section, I discuss some theories and hypotheses that inform written CF.

### **1.1 The Interaction Hypothesis**

The Interaction Hypothesis (Long 1996: 451) looks at negotiation for meaning, especially that which leads to interactional adjustments by the target language expert or more abled interlocutor, as something that “facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways.” Moreover, negotiation for meaning, which involves discourse strategies by a native speaker or a more proficient speaker such as clarification request, confirmation checks, repetitions, reformulations and rephrasings, is indeed important for acquisition (Long 1996). One of the reasons for this, according to Long (1996: 452), is “The frequencies of target forms in the reformulations tend to be higher, as negotiation involves recycling related items while a problem is resolved, which should increase their saliency and the likelihood of their being noticed by the learner.” In other words, because negotiation increases comprehensibility, the meaning of new forms is easier to understand and, thus, making the forms acquirable (Long 1996).

Like Long (1996), Gass and Mackey (2012) say that communication breakdown, which triggers negotiation for meaning, is beneficial for L2 development. This is because when a communication breakdown happens, corrective feedback, mentioned earlier such as clarification requests and confirmation checks, repetitions, among others, may be used to resolve the problem.

There are two types of input, namely, positive evidence and negative evidence (Long 1996). Positive evidence is “the provision of what is grammatically correct.” (Frear and Chiu 2015: 25). Its role is the provision of interactionally modified comprehensible input that can be used for acquisition (Frear et al. 2015). Structures or hypothesis from a learner’s L1 can be incorrectly transferred onto

L2 structures (White, 1989). When this happens, negative evidence is needed (Long 1996) for the provision of “interactionally modified corrective feedback about what is not grammatical... and this serves to facilitate acquisition through cognitive processes” (Frear et al. 2015: 25) such as noticing and pushed output. The provision of these two types of input occur during negotiation for meaning.

It is important to note that The Interaction Hypothesis is useful to written communication despite being “originally designed with oral communication in mind” (Frear et al 2015: 25).

## 1.2 The Noticing Hypothesis

Ortega (2009) explains that the insights Schmidt had from his study of Wes and of himself as a student of Portuguese in Rio de Janeiro (Schmidt and Frota 1986) played as inspiration when he proposed the Noticing Hypothesis. The Noticing Hypothesis argues that “subliminal SLA is impossible”, conscious attention is required for the transformation of input into intake (Van Beuningen 2010: 5). Therefore, for Schmidt, noticing is a prerequisite for language learning.

Noticing happens when a learner’s brain detects something new, even if the awareness is fleeting, despite having no understanding of “how the new element works, and possibly even if there is no reportable memory of the encounter at a later time” (Ortega 2009: 63). When learners realize “a mismatch or gap between what they can produce and what they need to produce, as well as between what they produce and what target language speakers produce” (Schmidt 2001: 6), then they are said to be ‘noticing the gap’ (Schmidt et al. 1986). To facilitate ‘noticing the gap’ (Schmidt et al 1986), CF can be used as cognitive focusing devices (Hulstijn and Schmidt 1994). This claim is shared by Schmidt when he said that CF fosters noticing and, therefore, has a significant role in language learning of adults (Schmidt et al. 1986).

The ability to attend to the new features of the L2 can be facilitated through internal or external means (Ortega 2009). Noticing is fostered internally when it is initiated by the learner herself, for example, when she has difficulty solving a problem like constructing a sentence and “express her thoughts and in the process discovers something new” (Ortega 2009: 63). Instances of noticing can also be fostered externally. It can be done “through a lesson orchestrated by a teacher, a question or reaction from an interlocutor, and so on” (Ortega 2009: 64).

It is also interesting to note that in the context of Noticing Hypothesis, written CF is at an advantage over oral CF (Adams 2003). This is because “demanding on learners’ attentional resources, online language production and orally provided CF might produce such a cognitive overload” (Van Beuningen 2010: 6). In comparison, learners have sufficient time and attentional resources as well when evaluating their output with the CF given to them in writing (Van Beuningen 2010).

## 1.3 The Skill Acquisition Theory

When McLaughlin (1987, 1990) and Anderson (1983, 1985) developed their skill acquisition models, what they had in mind was the learning of skills in general (Bitchener 2012a). However, these models also refer to language learning since “it involves processes similar to those of other skills, namely, processes that lead to complex behavior as a result of the mastery of simple processes” (Bitchener 2012a: 350, Schmidt 1992).

Anderson's (1983) Adaptive Control of Thought theory is "the most influential version" (Ortega 2009: 84). It highlights the role of explicit knowledge, which includes knowledge acquired from the provision of written CF, and implicit knowledge in learning (Bitchener 2012a). Moreover, it explains that knowledge begins with declarative knowledge which is gradually converted into automatized procedural knowledge through relevant practice (Frear et al. 2015). Declarative knowledge is a learner's explicit knowledge of a language or 'knowledge that' while procedural knowledge is implicit knowledge or 'knowledge how' (Ortega 2009:84). Practice allows for many trials, therefore, it "enables controlled processes gradually to be withdrawn during performance and automatic processes to take over the same performance" (Ortega 2009: 84). While practice may be seen as important in automating structures, Ellis (2009a) cautions against relying on skills acquisition theory alone. Upon evaluating explicit knowledge, Ellis (2009a) posits that it only has a "facilitative role" and that it does not have a "direct effect on implicit knowledge" (Frear et al. 2015).

To summarize, skill acquisition theory views learning as a result of gradual conversion from controlled to automatic performance (Ortega 2009). During the process of proceduralization or automatization, it is of utmost importance that learners be given explicit feedback immediately after an error is committed to reveal the breakdown "in the application of the declarative knowledge to the behavioral task" (DeKeyser 2007:216).

#### 1.4 The Sociocultural theory

The Sociocultural Theory of Russian psychologist Lev Vygotsky states that "all cognitive development (including language development) occurs as a result of social interactions between individuals" (Bitchener 2012a: 351). It is very important because it is the only social approach to learning an additional language that is fully accepted as a legitimate SLA theory (Ortega 2009). In fact, it has, now, "become a must-include chapter in SLA textbooks" (Ortega 2009: 219). Furthermore, it is significant because it offers insights about the L2 learning process that includes learners' response to CF, how they respond to it or fail to respond to it (Bitchener 2012a). These insights are different from that of the cognitive interactionist's perspective. Feedback in the sociocultural perspective is viewed as "help that is jointly negotiated between experts and novices" (Aljaafreh and Lantolf 1994: 480). In contrast, feedback is defined as "transfer of linguistic information from a tutor to a tutee" (Ortega 2009: 225) in the cognitive interactionist's approach.

When L2 learners receive linguistic knowledge through sufficient 'scaffolding', which includes the provision of CF, they can become 'self-regulated' from being 'other regulated' (Lantolf and Thorne 2007). 'Other regulated' is when learners are provided scaffold in the zone of proximal development (ZPD) by their teacher or a more proficient learner. On the other hand, becoming 'self regulated' is when learners can use the L2 autonomously. The ZPD is the "point at which learning is possible" (Bitchener 2012a: 352).

Leontiev's Activity Theory is another concept related to the sociocultural theory. According to the Activity Theory, an activity has three different levels, namely "the motives (beliefs and attitudes) which elicit the activity; the actions brought about by goals to achieve the action; the conditions or operations under which the activity is carried out" (Bitchener 2012a: 352). Moreover, it explains why learners may or may not respond to CF during writing activities (Bitchener 2012a).

While accuracy is important for some learners which may explain why they respond to CF and learn from it, others may focus more on fluency and content that is why they may not be so keen to respond to CF (Bitchener 2012a).

## 2. Written CF: Explicitness and Comprehensiveness

In written error correction, methodologies vary in terms of their “explicitness, their focus, the person providing the feedback, the feedback medium, and so on” (Van Beuningen 2010). However, the dichotomies that are most researched are the contrast between direct and indirect CF (explicitness) and focused and unfocused CF (focus/scope) (Van Beuningen 2010). Therefore, this section discusses the explicitness and comprehensiveness of written CF.

### 2.1 Explicitness: Direct vs. Indirect

Explicitness is “how feedback draws learners’ attention to the location or nature of an error” (Brown 2012: 862). In indirect CF, the teacher indicates that the learner has made an error but does not provide the correct answer, leaving the learner to work out the correction for herself (Ellis 2009b). It is said to be most effective because it encourages learners to do guided learning and problem solving (Lalande 1982). Moreover, when learners are given indirect feedback, they are likely to reflect about linguistic forms more deeply (Ellis 2009b). These reasons convinced some researchers (Ferris and Roberts 2001) that indirect CF caters to long term-learning.

Ellis (2009b) argues that indirect CF that does not show the exact location of the error may be more effective because learners may engage in deeper cognitive processing as opposed to indirect feedback that shows the location of the error.

Some researchers are less supportive of indirect CF. Chandler (2003) claims that indirect CF does not give learners enough information that would help them solve complex errors. Moreover, Chandler (2003) goes on to say that in contrast to direct CF which enables learners to “instantly internalize the correct form as provided by their teacher, learners whose errors are corrected indirectly do not know if their own hypothesized corrections are indeed accurate” (Van Beuningen 2010: 12).

Indirect CF may be more appropriate for more advanced learners and may be considered less effective for low proficiency learners who do not have an extensive linguistic repertoire to refer to (Bitchener 2012a).

On the other hand, in direct CF, the learners are provided with correction (Ellis 2009b). It may be more effective because it “1. reduces any confusion they may experience if they are unable to understand what it is saying, 2. provides them with information to resolve more complex errors, 3. offers more explicit feedback on hypothesis that are tested by learners, and 4. is more immediate” (Bitchener 2012a).

A disadvantage of direct CF is that it may not lead to long-term learning because, unlike indirect CF, it does not promote deeper cognitive processing, it only allows learners to engage in minimal processing (Ellis 2009b). Therefore, direct CF may be more appropriate for low proficiency learners.

Explicitness of the different options for direct CF and indirect CF also vary. Direct error correction is considered to be the “most explicit form of direct feedback insofar as it tells the learner what

the correction is" (Bitchener et al 2012: 132). Another direct feedback option is metalinguistic explanation wherein the teacher gives "metalinguistic clue as to the nature of the error" (Ellis 2009b). In indirect CF, underlining, circling and highlighting which indicates where the error occurred is considered more explicit than tally of errors in the margin (Bitchener et al. 2012).

In light of the discussion above, this paper focuses on critically reviewing direct CF studies in part 3. This is because although earlier studies (Lalande 1982, Semke 1984), that focus on which is the more effective form of feedback, did not find any difference between direct CF and indirect CF, recent studies (Van Beuningen, De Jong and Kuiken 2008) found direct CF to be more effective in learning targeted structures (Bitchener 2012b).

## **2.2 Comprehensiveness: Focused vs Unfocused**

In focused written CF, one or two specific error types are targeted for correction. On the other hand, in unfocused written CF, the teacher provides correction "on a comprehensive range of forms and structures" (Bitchener 2012b).

Focused written CF may be more useful for low proficiency learners because it "places a lighter attentional load on their processing capacity" (Bitchener 2012b). On the other hand, high proficiency learners may find unfocused written CF effective "if they are able to attend to a range of linguistic foci" (Bitchener 2012a: 357). Having said this, this paper focuses on critically reviewing focused direct CF studies in the next section.

## **3. Critical Review of Three Empirical Studies**

### **3.1 Empirical Study of Bitchener and Knoch (2010)**

This study of Bitchener and Knoch (2010) investigated the effects of written CF on the two functions of the English article system in new pieces of writing over a ten-month period. Moreover, it hopes to find out whether accuracy in the use of the target form varies according to the three written CF options.

The participants of this study are fifty-two low-intermediate ESL learners at a university in New Zealand. Students who were studying at the university for the first time took a placement test composed of a grammar test, a writing test and a one-on-one interview before being assigned to the low-intermediate proficiency level. On the other hand, current students were assigned to the same proficiency level based on an earlier competency-based assessment.

The participants were randomly assigned to four groups, namely, direct CF, written and oral metalinguistic explanation, direct CF and written metalinguistic explanation, direct CF only and the control group. A week after taking a pretest, the participants received treatment session except the control group. On the same day, they took the immediate posttest. There were no more subsequent feedback sessions. The first delayed posttest happened after two months, the second delayed post-test after six months and finally, the third delayed post-test after ten months.

Results showed that the three WCF groups' accuracy in the use of the two functions of the English article system improved over time and they outperformed the control group in all four post-tests. However, the groups' development over the ten-month period varied. As to the second re-

search question, no difference was found in the effectiveness between the three feedback options.

This study, indeed, contributes to the existing literature by providing evidence of the efficacy of written CF in the long-term acquisition of certain linguistic structures. In this respect, it lends support to Truscott's claim that certain linguistic structures can be learned with the provision of written CF. However, the results of this study does not support Truscott's (1996) argument that written CF promotes 'pseudo-learning' because it showed that written CF helped in the acquisition of the target form in new pieces of writing and not merely on revision. Moreover, the positive effect was maintained over time. Another contribution of this study is it highlights the utility of explicit learning for transforming declarative knowledge in the long-term. This was manifested by the enduring effect of written CF on the accuracy in new pieces of writing over ten months, relatively longer than two months in the previous studies.

Some limitations of this study include the small sample size as the researchers found it challenging to find learners that would participate in a long-term study. Using similar type of writing tasks on multiple occasions may be seen as a limitation as it may have deprived learners to show their ability to write accurately in other genres.

An implication of this study is that teachers can use written CF to help learners acquire with accuracy the two functional uses of the English article system.

The researchers concluded that the additional time (thirty-minute oral metalinguistic explanation as a mini lesson) of the first treatment group did not give them an advantage over the other treatment groups. Therefore, if time is not an advantage, could frequency be? If they had been given multiple treatment sessions, will the result change? It should be remembered that this study only provided one treatment session.

### **3.2 Empirical Study of Shintani, Ellis and Suzuki (2014)**

Shintani, Ellis and Suzuki (2014) investigated the effects of direct CF and metalinguistic explanation on two linguistic structures, namely the indefinite article and the hypothetical conditional in new pieces of writing.

One hundred seventy-one Japanese university students participated in this study. They were studying different subjects, had at least six years of formal English instruction and had pre-intermediate level of proficiency. These participants were randomly assigned to one of five groups, namely metalinguistic explanation, direct CF, metalinguistic explanation with revision, direct CF with revision and the control group.

All groups participated in five writing sessions. In the first week, all of them did the first writing task. In the following week, the direct CF and metalinguistic explanation groups wrote a new piece of work after studying the feedback returned to them. The direct CF with revision and metalinguistic explanation with revision groups revised their first writing and wrote a new piece of work. The control group only wrote a new piece of work. In the final week, all of them answered a background questionnaire about information such as gender, age, languages they can speak and more. Aside from the writing tasks and background questionnaire, a different set of students (ten) who were not participants of the main study were interviewed in Japanese about their response to direct CF and metalinguistic explanation received after completing writing tasks.

Analysis of the data revealed that written CF was effective in improving the accuracy for hypothetical conditional but not for the indefinite article. The authors explained that it is challenging for low proficiency learners to use feedback for two structures when the writing task is demanding. They further explained that between the two structures, learners tend to focus on one that is more salient and semantically functional, the hypothetical conditional. In terms of the relative effect of direct CF and metalinguistic explanation, this study found that metalinguistic explanation resulted in short-term improvement in accuracy as compared to direct CF which promoted long-term improvement. The authors offered a possible explanation that direct CF provided positive and negative evidence on the specific errors of the learners. Finally, of all the four treatments, direct CF with revision was the most effective.

This study is valuable because it focused on two very different structures while mostly of the previous studies only focused on one grammatical structure. The authors cautioned against generalizing the findings of this study as it may or may not apply to the type of participants, Japanese students who despite having extensive explicit English grammatical knowledge have limited ability to apply this in meaning-focused tasks.

This study has great contributions in SLA. Having said this, a few questions may be put forward. The authors' rationale in employing a one-shot feedback treatment in this study is that some studies in the past that did the same showed a single feedback treatment was effective in improving learners' accuracy in new pieces of writing. However, if more than one feedback treatment was provided, considering that the participants were not advanced learners, would the results have changed? Would learners have shown improvement in accuracy for the indefinite article as well?

### 3.3 Empirical Study of Stefanou and Révész (2015)

This classroom-based study of Stefanou and Révész (2015) investigated the effectiveness of two types of feedback, direct written feedback and direct written feedback with metalinguistic comments, while taking into consideration learner differences, as well, on learners' article use for generic and specific plural reference. These learner differences are grammatical sensitivity and knowledge of metalanguage. The former is defined as "the ability to recognize the different syntactic patterns and grammatical functions of words... irrespective of knowledge of grammatical terminology" while the latter is "the ability to use subject-specific terminology to articulate metalinguistic rules" (Stefanou et al 2015: 265).

The participants of this study are eighty-nine Greek high school EFL students. They had six to seven years of English instruction and had an intermediate level of proficiency. The authors chose intermediate level proficiency students for two reasons. One is they may have some working knowledge of the English article system but may not have mastery of the generic article use. Second is to be able to compare their study to other research with participants having this level of proficiency in English.

The assessment tasks employed in this study are *text summary test* and *truth value judgment test*. These measure article use with both specific and generic plural referents. There were also two tests to measure learner differences, namely, *words in sentences test* and *test of metalanguage*. The first one is used to measure grammatical sensitivity while the second one measures knowledge of



metalanguage.

On day one of the first week, the learners took a screening test which is the grammar part of the Oxford Placement Test. The following day, they took the pretest and the first treatment task. After a few days, they did the second treatment task after studying the corrective feedback on the first treatment task. In the second week, they again reviewed corrective feedback on the second treatment task that was returned to them and then took the immediate posttest. In the third week, they took the *words in sentences test* and *test of metalanguage*. Finally, they took the delayed posttest on the fourth week.

Results showed that direct written CF group outperformed the control group on article use for specific and generic plural reference. The authors found it interesting that the addition of metalinguistic information to direct written CF did not afford much additional benefit. In addition, learners with greater grammatical sensitivity and knowledge of metalanguage seemed to improve when direct written CF, without metalinguistic information, was provided but not when was supplied

A limitation of this study include their consideration of only two learner factors. They suggested studying other learner factors such as working memory capacity and motivation.

The value of this study lies in the fact that it is the first research to investigate article use for specific and generic plural reference as well as the learner factors, grammatical sensitivity and knowledge of metalanguage. Indeed, this is an exceptional research. However, it may be worth thinking whether they would find value in metalinguistic comments had the participants been advanced learners.

#### 4. Conclusion

The three studies reviewed in this paper appear to be methodologically solid. This is because they had avoided the design flaws of previous studies. They were able to achieve this by observing key design components which are pretest, immediate posttest and delayed posttest. Moreover, all studies had a control group.

As expressly stated in the earlier parts of this paper, the focus is direct written CF in terms of explicitness. On the other hand, with respect to scope, focus or comprehensibility, this paper discussed focused written CF. According to existing literature, *focused* and *direct written CF* may be more appropriate for learners with low level of proficiency. This is indeed manifested in the results of the three empirical studies reviewed. Therefore, knowledge in existing SLA literature, particularly the provision of written CF would inform the teaching practice of both language learning teachers and composition teachers.

The debate on the efficacy of written CF initiated by Truscott (1996) may not have been resolved as of yet. However, results from the studies of Bitchener and Knoch (2010), Shintani, Ellis and Suzuki (2014) and Stefanou and Révész (2015) as well as the existing literature have provided empirical evidence that written CF is effective on the acquisition of certain linguistic forms or structures such as the two functions of the English article system and the past tense as well. These empirical evidence may be saying that written CF may have a role in L2 development, after all as opposed to Truscott's claim that it does not.

Having said this, future research should be conducted on issues in written CF such as: the dichotomy between direct and indirect written CF, the dichotomy between focused and unfocused written CF, whether some types of written CF are more effective than others in treating linguistic errors, whether learners' educational and L2 learning background can tell us the extent of benefit from written CF and many more (Bitchener et al 2012). Finally, as what Ferris (2009) suggests, these studies should be well-designed to provide valid results. This is the challenge for written CF researchers.

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