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Tesis de Licenciatura en Lengua y Literatura Inglesa

"Error treatment in EFL writing: contributions to the understanding of corrective feedback strategies and their effects on students' accuracy"

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Chapter 1: Introduction

While feedback is a central aspect of L2 writing programmes across the world, the research literature has not been equivocally positive about its role in L2 development, and teachers often have a sense that they are not making use of its full potential. (Hyland & Hyland, 2006b, p. 77)

Written corrective feedback, defined as "a written response to a linguistic error that has been made in the writing of a text by an L2 learner" (Bitchener & Storch, 2016, p.1), refers to a term and a practice that has been much studied and hotly debated in Second Language Acquisition (SLA) and English Language Teaching (ELT) over the past decades. According to Brown (2007, p. 334), "we learn to write if we are members of a literate society and usually only if someone teaches us". Similarly, Harmer (2007, p. 25) defines one of the teacher's roles as "feedback provider". Finally, as Ferris (2011, p. 14) states, "most teachers at least implicitly believe in the importance of error feedback and provide it consistently to their students". Under these premises, the role of corrective feedback in the teaching of ESL/EFL writing should appear as a widely accepted practice. However, how to teach students to write accurately and, most importantly, how to encourage them to benefit from the usefulness of the provided feedback is an area of candent discussion and deep discrepancy among ELT theoreticians and practitioners.

1.1 Purpose and motivation

Writing proficiently may imply different conceptions as regards the type of errors that should be avoided and the pedagogical practices that may help to prevent or eradicate them. These perspectives vary according to different theoretical and methodological approaches in the fields of Second Language Acquisition (SLA) and

English Language Teaching (ELT). Within those frameworks, corrective feedback constitutes an ideal "dimension of practice" in that "all teachers will need to make decisions about whether, how, and when to correct their students' errors", and also because the decisions they make "depend on their overall theory of teaching and learning" (Ellis, 2009b, p.15). Consequently, the role of feedback has a place in most theories of second language learning and teaching. As stated by Ellis (2009b, p. 3), in both "behaviourist and cognitive theories of L2 learning feedback is seen as contributing to language learning". Similarly, Ellis (2009b, p. 3) continues, in both, "structural and communicative approaches to language teaching, feedback is viewed as a means of fostering learner motivation and ensuring linguistic accuracy". Furthermore, reflecting on corrective feedback serves as a basis for "evaluating and perhaps changing existing corrective feedback practices" and, more broadly, for "developing teachers' understanding of teaching and of themselves" (Ellis, 2009b, p. 15). However, as Bitchener and Ferris (2012, p. 44) argue, whether written corrective feedback is an effective tool "to help student writers build greater awareness of problematic error patterns and skills to self-edit or avoid them" is a question that could still benefit from future research. This means that although corrective feedback has won its place in the teaching and learning practices, several questions still remain unanswered as regards how to make the most of it. Following this vein, the present study is aimed at shedding light on this important and sometimes controversial topic in an attempt to provide some useful contributions to the pedagogy of writing in ELT.

The main hypothesis underlying this work is the belief that written corrective feedback is a potential tool for improving the accuracy of students' writing. This tool might prove useful to bridge the gap between teachers' goals and students' needs in the path towards a proficient use of the written language in EFL contexts and practices. This stated hypothesis has its grounds on a number of studies on the effectiveness of written corrective feedback (Ashwell, 2000; Bitchener, 2008;

Bitchener & Knoch, 2008a, 2008b, 2009; Chandler 2003; Fathman & Whalley, 1990; Ferris, 1995, 1997; Lalande, 1982). More specifically, several research studies have shown that students strongly appreciate teachers' corrections as essential for developing and improving their writing skills (Ferris, 2006; Ferris & Roberts, 2001). Furthermore, increasing evidence shows that corrective feedback can assist learning (Bitchener, Young & Cameron, 2005; Ellis, Loewen & Erlan, 2006), and, according to Ellis (2009b, p.6) even more research has switched "from addressing whether corrective feedback works to examining **what kind works best**" (emphasis added).

It is precisely this last line of research, together with some issues that stem from my own personal experience as a student first and later as a teacher, which have motivated me to carry out this study on the topic of written error treatment. As a university student I have gone under the hard experience of trying to write accurately myself. Throughout all these years of training I have been asked to write diverse text types and I have been given different kinds of feedback such as oral explanations, direct and indirect marking, focused and unfocused error treatment or metalinguistic explanations, among others. It is interesting in this point to highlight that I am not fully aware of which of the mentioned methods has been more helpful for the enhancement of my writing accuracy. However, I feel truly certain that a proficient use of the language would not have been possible without my teachers' assessment and corrections.

From the perspective of an in-service EFL teacher, I constantly face the arduous responsibility of trying to guide students along the challenging enterprise of written composition. My intervention as a teacher is aimed at the provision of comprehensive feedback, trying to help students not only to develop communicative writing strategies and foster fluency, but also to acquire grammatically accurate forms. For that reason, feedback is a central aspect of my teaching practice. Furthermore, how to take hand of the different possible strategies to make "use of its

full potential", as Hyland and Hyland (2006b, p. 77) would say, has become a challenge. I have witnessed how corrective feedback can be, more often than not, completely ignored by students, who make the same errors recurrent in subsequent pieces of writing over and over again. Consequently, it has become imperious to ask what the effects are of the feedback strategies used in the classroom and how they can be made more beneficial for students. As Pawlak (2014, p. 253) argues,

we will never be able to identify a feedback option or even a set of such options that will work equally well for everyone, but by attempting to uncover more and more of the missing pieces of this intriguing puzzle we are bound to identify ways of making correction more effective, thereby addressing the concerns of practitioners and optimizing foreign language instruction.

1.2 Research topic

Feedback can be positive or negative. Positive feedback affirms that a learner response to an activity is correct. It may signal "the veracity of the content of a learner utterance or the linguistic correctness of the utterance". In pedagogical theory, positive feedback is viewed as important because "it provides affective support to the learner and fosters motivation to continue learning". Negative feedback signals, in one way or another, that "the learner's utterance lacks veracity or is linguistically deviant". That is, it is "corrective" in intent (Ellis, 2009b, p. 3). Both SLA researchers and language educators have paid careful attention to corrective feedback, but, as stated before, they have frequently disagreed about whether to correct errors, what errors to correct, how to correct them, and when to correct them (Hyland & Hyland, 2006a). This matter raises the question about the extent to which errors should be seen in a negative or positive light. In other words,

Should errors be seen as an act that needs to be prevented from occurring or as acts that should be viewed positively because they shed light on a learner's current level of acquisition and the role they can play in the development of the target language? (Bitchener & Ferris, 2012, p. 3)

In order to have an informed view of the topic, we need to take into account the various theoretical positions that have been advocated in the literature. The call for longitudinal evidence on the efficacy of written corrective feedback for ESL/EFL writers has been made repeatedly since Truscott (1996) published his article: "The case against grammar correction in L2 writing classes". As Polio (2012, p. 372) notices, "rarely has one article in the field of language learning and teaching inspired so many empirical studies in such a short time and forced the field to examine an entrenched practice". In general terms, as skilfully summarised by Bitchener et al. (2005), Truscott (1996) claimed that grammar correction should not have a place in writing courses and that "it should be abandoned". From an analysis of previous studies, he concluded that no convincing research evidence exists that error correction ever helps student writers improve the accuracy of their writing. He also explained that this finding should not be surprising, because, on the one hand, he argued that error correction, as it is typically practised, overlooks SLA insights about "the gradual and complex process of acquiring the forms and structures of a second language". On the other hand, he outlined a range of practical problems related to "the ability and willingness of teachers to give and students to receive error correction". Moreover, he claimed that error correction is harmful because "it diverts time and energy away from the more productive aspects of a writing programme" (Bitchener et al., 2005, p. 191).

As expected, these claims generated a considerable amount of vigorous debate (Ellis, 1998; Ferris, 1999; Ferris & Hedgcock, 1998; Truscott, 1999) and Truscott's

views were addressed with equally strong arguments. Ferris (1999) was the first to publish a rebuttal, arguing that Truscott's conclusions were premature in light of the limited and conflicting evidence and that further research was required before a stand could be made one way or the other. As clearly explained by Bitchener et al., (2005, p. 192), while Ferris (1999) acknowledged that Truscott "had made several compelling points concerning the nature of the SLA process" and some "practical problems with providing corrective feedback", she also maintained that the evidence he had cited in support of his argument was not always complete. Also Chandler (2004) pointed out that Truscott (1996) had not taken into account the fact that reported differences need to be supported with statistically significant evidence. Finally, Ferris (1999) maintained that there were equally strong reasons for teachers to continue giving feedback, mainly when students themselves had regarded its value, although she did accept that it was necessary to consider ways of improving the practical issues highlighted by Truscott.

Despite his call for the abandonment of error correction, Truscott (1999), in his response to Ferris (1999) finally acknowledged that many interesting questions remain open and that it would be premature to claim that error correction can never be beneficial under any circumstances. Agreeing with the future research focus proposed by Ferris (1999), Truscott (1999) suggested that more attention should be given to the investigation of two main questions. In the first place, which methods, techniques, or approaches to error correction lead to short-term or long-term improvement? In the second place, whether students make better progress in monitoring for certain types of errors than others. Because of scope and length restrictions of the present study, attention will particularly be placed on the first aspect, leaving the study of the effect that written corrective feedback can cause on different types of error for some future research.

1.3 Research questions

Providing solid grounds to our initial hypothesis that written corrective feedback is a potential tool to improve the accuracy of students' writing, Bitchener and Ferris (2012, p. 84) conclude that when students receive written corrective feedback on a text and are then asked to revise that text "they do so successfully, with 'success' defined as a statistically significant reduction in the number of errors from one draft to the next". When they do not receive corrective feedback, "they are much less able and likely to correct errors on their own". Now, while these findings are clear and consistent, the more controversial question is: "Does the ability to self-correct errors after receiving corrective feedback matter in the long run?" To put it another way, if students receive feedback and use it to improve an existing text, will that same process of receiving and applying corrective feedback make them more successful, accurate writers in their future?

Based on these premises, and guided by the evidence shown in previous studies on error correction in EFL/ESL writing, this preliminary and exploratory study seeks to address the following three Research Questions.

RQ1) To what extent does error corrective feedback help EFL students improve their written accuracy in the short-term revision process?

RQ2) To what extent does error corrective feedback help EFL students improve their written accuracy in the long-term learning process?

RQ3) What is the effect of different error corrective feedback strategies on students' written accuracy in the short-term and in the long-term processes?

1.4 Structure of the Thesis

This study is organised in different chapters as follows. The literature review is presented in Chapter 2. Within that section, some key terms are introduced first to be followed by the main tenets of different SLA theories on the role of error correction. After that, some specific consideration about written corrective feedback, such as types of errors and types of feedback, are provided with the aim of shaping a comprehensive theoretical framework for the analysis of the results obtained. The methodology is described in Chapter 3, paying special attention to the characteristics of the participants and instructional contexts and the description of the research design. Some considerations about the feedback types employed, the targeted errors analysed and the writing tasks provided are also included. The results are reported in Chapter 4 following the order in which the three research questions have been presented in the Introduction. The discussion of the main findings is also included in the same chapter. In Chapter 5, some pedagogical contributions on the use of corrective feedback are introduced. Finally, some general conclusions are drawn in Chapter 6 together with limitations and suggestions for further research. An Appendix (I) follows containing a few samples of the students' texts analysed as well as the writing tasks models given. Furthermore, a digital Appendix (II) has been added which contains all the participants' writing samples (270 texts) as well as some additional documents.

Chapter 2: Literature Review

2.1. Defining key terms

2.1.1 Error and Error Correction

Scholars have examined and even challenged the notion of 'error' at various points in time. Ferris (2011, p. 2) reports that Corder (1967), for example, argued that what we term as error in L2 learners is actually a "natural developmental stage, analogous to what children exhibit in acquiring an L1". Because nearly all children pass eventually through these stages to adult competence in the L1 without intervention, by extension, "L2 errors should not be seen as problematic either". In a different line of argument, Williams (1981) asserted that errors are "primarily in the eye of the beholder and especially in the minds of writing teachers wielding red pens". In other words, this would mean that we notice errors in student writing because we are looking for them, not because they are problematic and, in other contexts, we might not even spot them at all (Ferris, 2011, p. 2).

According to Ferris (2011), though these arguments problematize the notion of error in student writing, theoreticians and teachers on L2 writing do agree on the following two assertions:

1. Though many L2 writing errors may indeed be developmental and may resolve themselves over time and with more exposure to the L2, not all of them will. There is considerable evidence that adult L2 learners may 'fossilize' (get stuck and fail to make progress) without sufficient motivation and opportunity to do so, including feedback and instruction. (Ferris, 2011, p. 3)

2. While many writing teachers do obsess over relatively 'minor' points and errors, to the extent that some scholars claim that written errors are only imagined by teachers, the argument goes too far. L2 student writers do produce non-target constructions that many proficient users of the language would not only notice but identify as incorrect. Further, some of these are 'global' errors, meaning that they interfere with overall text comprehensibility. (Ferris, 2011, p. 3)

With these considerations in mind, it would be helpful for the discussions going forward in this work to offer a working definition of what is meant by 'error' in student writing: "Errors are morphological, syntactic, and lexical forms that deviate from rules of the target language, violating the expectations of literate adult native speakers" (Ferris, 2011, p. 3). While there are other ways the term could be defined, this definition seems adequate enough as a starting point, although, as stated by Pawlak (2014, p. 4), the reference to the "native speaker norm" suffers from some weaknesses, mainly if we consider the different English varieties that exist as well as the fact that the majority of teachers in foreign language contexts are not native speakers.

Another important aspect to consider is the difference between 'error' and 'mistake'. To differentiate both terms, 'competence' is the key notion for Corder (1981, p. 167), who attributes mistakes to "the slip of the tongue in language performance", while errors have to do with "language competence". This definition is complemented by Bartholomae's (1980) understanding of errors. For him, the key concept is 'interlanguage' or 'intermediate system'. He observes that the error analyst is primarily concerned "with errors that are evidence of some intermediate system". This kind of error occurs because the writer is an active, competent language user who "uses his knowledge that language is rule-governed to construct

hypotheses that can make an irregular or unfamiliar language more manageable" (Bartholomae, 1980, p. 258).

Finally, in this work 'error correction' is used interchangeably with such terms as 'corrective feedback' or 'error treatment' to indicate teachers' responses to incorrect language forms in their learners' writing. As such, it fits in with the definition provided by Sheen and Ellis (2011, p. 593), who explain that "corrective feedback refers to the feedback that learners receive on the linguistic errors they make in their oral or written production in a second language".

2.1.2 Implicit and Explicit L2 Knowledge

Conscious knowledge about the L2 grammatical system has been widely referred to as 'explicit or declarative knowledge' as opposed to 'implicit or procedural knowledge' (DeKeyser, 2003). Explicit knowledge denotes "a conscious awareness of grammatical rules and the appropriate meta-language for labelling and verbalizing this knowledge" (Ellis, 2004, p. 229). Implicit knowledge, on the other hand, is claimed to be "unconscious, non-verbalizable, and rapidly and easily accessible during online language use" (van Beuningen, 2010, p. 7).

Disagreements concern both the value of explicit knowledge in itself and the connection between explicit and implicit knowledge. This debate is important when exploring the effectiveness of error correction because corrective feedback contestants (e.g. Krashen, 1982; Truscott, 1996) have stated that if corrective feedback yields any L2 knowledge at all, this emerging knowledge could only be explicit in nature. They have also pointed out, as clearly outlined by van Beuningen (2010, p. 8), that "the benefits of explicit knowledge as such to actual L2 performance are rather limited". Thus, the idea that explicit knowledge will never become implicit then leads to the conclusion that learners' interlanguage system is

"unsusceptible to corrective language", or, in Truscott's (1996, p. 345) words, that corrective feedback will only lead to "a superficial and possibly transient form of knowledge or 'pseudolearning'".

Alternative perspectives are possible, however, as summarised by van Beuningen (2010). Many SLA researchers seem to converge on the position that there is an 'interface' connecting implicit and explicit knowledge bases and they propose that the gap between explicit knowledge and language use can be gradually bridged by output practice (DeKeyser, 2003). By practicing language production, L2 learners are enabled to consolidate and automatize their linguistic repertoire. In this way, corrective feedback is believed to further assist this 'proceduralization' of declarative L2 knowledge (Ellis, 2010). Furthermore, some others argue that "explicit knowledge may feed into the intake process by helping learners notice the formal features of the input". From this perspective, corrective feedback could be expected to foster interlanguage development because "it facilitates the process of noticing the gap" (van Beuningen, 2010, p. 9). These and other related issued will be described in detail in the section that follows, where attention is placed on the role of corrective feedback according to different SLA theories.

2.2 Theoretical perspectives on the language learning potential of Written Corrective Feedback

SLA theorists and researchers are interested in how individuals learn or acquire a second language. Consequently, they also have an interest in what can be done to help learners overcome the errors they make in the process of acquiring the target language. For Bitchener (2012, p. 349), "theories, in that they offer statements about why one might expect a particular independent variable" (e.g. 'corrective feedback' in this study) to "influence a particular dependent variable" (e.g. 'accuracy' in this study), are the best place to start a discussion on what the potential might be for

written corrective feedback to play a role in L2 learning and acquisition. This section considers, then, the SLA theories that, according to Bitchener (2012) and Pawlak (2014), have something to say about the role of corrective feedback for L2 development.

First of all, the focus will be placed upon those early perspectives, such as Behaviourist and Nativist theories and Krashen's Monitor Model. Secondly, some more recent theories will be introduced. These theories come from two different empirical perspectives: cognitive and socio-cultural. From the first, the Information-Processing Models, Skill Acquisition theories, and Interactionist theories will be considered. From the second, I will present the most important tenets of Sociocultural theories in relation with the role of written corrective feedback for L2 learning.

2.2.1 Early SLA perspectives on Error and Written Corrective Feedback

2.2.1.1 Behaviourist perspectives and the Nativist theory

During the 1950's and 1960's, errors were seen to interfere with the learning process and so should be prevented from occurring. Consequently, errors were considered more negatively than they are today. As put by Brooks (1960, p. 58), "error, like sin, is to be avoided and its influence overcome". Behaviourists claimed that errors should not be tolerated because they could lead to "habit forming". In this way, they would "interfere with learning of new target-like habits" (Bitchener & Ferris, 2012, p. 4). In general terms, it was believed that students learnt when they made the correct response to the stimuli they received. In this way, after the repetition of the correct forms, students would be able to produce error-free utterances or sentences. It becomes clear that the focus of the behaviourist approach was more on error prevention than on error treatment. Such a perspective on the occurrence of errors was drastically modified following Chomsky's (1959) attack on the main principles of behaviourism and the advent of his Nativist theory, which posited that "the ability to learn languages was innate and domain specific" (Pawlak, 2014, p. 9). Underpinned by Chomsky's (1968) view on how children acquire L1, studies of the 1970's (e.g. Brown, 1973; Slobin, 1970) further revealed that children go through stages, that child language is "rule-governed and systematic", that children "are resistant to error correction", and that they "revert to earlier hypothesis when two or more rules compete" (Bitchener & Ferris, 2012, p. 5).

These discoveries led to an interest in the language that is produced by L2 learners and, in particular, to an interest in the investigation of L2 learner's errors, known as 'Error Analysis' (EA). The contribution of EA was its convincing discovery that "the majority of L2 errors do not come from the learner L1 or L2 but that they are learner-internal" (Bitchener & Ferris, 2012, p. 5). However, despite its practical focus, EA soon came under attack on theoretical grounds. Then, in 1972, Selinker coined the term 'interlanguage', described as a "dynamic system obeying its own rules and evolving over time", to highlight this new focus on the language produced by learners (Selinker, 1972, p. 212). This triggered the adoption of a non-interventionist stance, with the effect that exposure to the target language and opportunities for its spontaneous use began to be seen as much more important than the correction of errors.

To sum up, earlier theoretical perspectives on how a L2 is acquired and about the role of error in that process were rapidly being undermined. The role of error in the L2 learning process started to be seen, therefore, less in terms of "an act that must be prevented from occurring" and more positively as "an indicator of the mental processes that take place during the learning and acquisition of the target language" (Bitchener & Ferris, 2012, p. 6).

2.2.1.2 Krashen's Monitor Model

Although Krashen's (1981, 1982, 1984, 1985) theoretical perspectives have received considerable criticism over the years, they have been highly influential in shaping the direction of subsequent perspectives (Bitchener & Ferris, 2012). Therefore, it is important to consider this contribution in some detail before looking at more recent theoretical perspectives. In fact, each of the five hypotheses of Krashen's (1985) 'Monitor Model', regarded by theoreticians as the first general SLA theory, have something to say, either directly or indirectly, about the language learning potential of written corrective feedback.

In his first hypothesis, the 'Acquisition-learning Hypothesis', Krashen (1985) makes a distinction between 'acquisition' and 'learning,' claiming that they are completely separate processes. Krashen (1985) explains that 'acquisition' occurs as a result of learners interacting in natural, meaningful communication and that 'learning' occurs as a result of "classroom instruction and activities in which the attention of learners is focused on form", including, for example, that which is provided by written corrective feedback, as described by Bitchener (2012, p. 349). In other words, Krashen equates 'acquisition' with 'implicit knowledge' and 'learning' with 'explicit knowledge'. Thus, for him, corrective feedback (both written and oral) plays no role in helping learners develop their acquired knowledge. Other researchers, such as DeKeyser (2001, 2007) and McLaughlin (1978, 1980, 1987), disagree with this position, claiming that there is an interface position, one in which 'learned' knowledge can be converted into 'acquired' knowledge.

However, in his second hypothesis, the 'Monitor Hypothesis', Krashen does not completely rule out a monitoring role for 'learning' and therefore a certain limited role for explicit corrective feedback (Bitchener, 2012, p. 350). But, as McLaughlin (1987) explains, "the monitor is thought to alter the output of the acquired system" before or after the utterance is actually written or spoken, and the utterance is

initiated entirely by the acquired system" (p. 24). This means that "the monitor can operate when there is sufficient time" (certainly during written performance) and can "enable learners to draw on their explicit knowledge when responding to written corrective feedback", if a focus on accuracy is important to them and if they have sufficient linguistic knowledge to draw upon (Bitchener, 2012, p. 350).

Then, in his 'Natural Order Hypothesis', Krashen (1985) states that learners acquire linguistic features of the target language in a predictable order and that this order is not changed by the order in which they are taught in class. Thus, he implies that "any acquisitional benefits from corrective feedback and form-focused teaching should not be expected". This further implies that a "focus on error and its treatment in the classroom is not going to aid the acquisition process", so it should be regarded as unnecessary (Bitchener & Ferris, 2012, p. 10).

Arising from the Natural Order Hypothesis is the 'Input Hypothesis'. Here, Krashen (1985) claims that L2 learners move along the developmental continuum by receiving "comprehensible input". He explains that, "if input is understood, and there is enough of it, the necessary grammar is automatically provided" (p. 2). Consequently, when learners are exposed to enough comprehensible input, there is no need for formal grammar instruction and thus, by implication, "no need to focus the learner's attention on errors that have been made or to treat them in any way" (Bitchener & Ferris, 2012, p. 11).

The fifth hypothesis, which is the 'Affective Filter Hypothesis', qualifies the conditions necessary for the fourth hypothesis, namely, that if learners have a "strong or high affective filter, they are unlikely to internalize any form of input, be it positive or negative feedback" (Bitchener, 2012, p. 350). According to Krashen (1985), those students whose attitudes are not optimal for second language acquisition will not only tend to seek less input, but they will also have a high or

strong affective filter, and, even if they understand the message, the input will not reach that part of the brain responsible for language acquisition.

Considering the five hypotheses as a whole, it can be understood that Krashen does not see a role for corrective feedback in developing acquired knowledge, that knowledge which learners "unconsciously and automatically draw upon as competent L2 users". However, it seems that he concedes that teaching and corrective feedback "can play an editing role in 'learning,' that is, in developing explicit knowledge". Because he sees 'learning' and 'acquisition' as completely different processes, he does not see "a role for corrective feedback in the conversion of explicit knowledge to implicit knowledge", as explained by Bitchener (2012, p. 350). Some more recent perspectives by those who support the 'interface' position are presented in the section that follows.

2.2.2 Recent SLA perspectives on Error and Written Corrective Feedback

Over the last 20 years, theoretical perspectives in SLA, including the role of error and its treatment, have become more prominent. Focusing on the interest in understanding how the acquisition process works and how the human brain processes and learns new information, theorists and researchers, working within various cognitive frameworks, have directed their attention on the learner as an essentially autonomous individual who, "despite drawing upon input from his social environment, ultimately determines his own learning or acquisition path". Also interested in the cognitive processing of language input are socio-cognitive theorists and researchers who focus on "the interacting roles of one's social environment and one's cognitive processes". Finally, socio-cultural theorists and researchers, have brought their attention "to the socially mediated and socially constructed nature of learning", as put by Bitchener and Ferris (2012, p. 12). I will now examine what are considered to be the most influential of these perspectives in terms of their inclusion of a role for corrective feedback in the SLA process.

2.2.2.1 Information processing models

Information processing models, developed by cognitive psychologists, have had a strong influence on the L2 models developed by McLaughlin (1987, 1990) and Anderson (1983, 1985). These models, also referred to as 'skill acquisition' models by some theoreticians, see SLA as a building up of knowledge systems that can eventually be called on automatically by learners.

Based on the view that complex behaviour builds on simple processes, McLaughlin (1987) argues that it is appropriate to also view second language learning in this light because it involves the acquisition of a complex cognitive 'skill':

To learn a second language is to learn a skill, because various aspects of the task must be practiced and integrated into fluent performance...Learning is a cognitive process, because it is thought to involve internal representations that regulate and guide performance...As performance improves, there is constant restructuring as learners simplify, unify and gain increasing control over their internal representations. These two notions -automatization and restructuring- are central to cognitive theory. (McLaughlin, 1987, pp. 133-134)

Moreover, the theory states that information may be processed in either a controlled (drawing on explicit knowledge) or automatic (drawing on implicit knowledge) manner and that learning involves a shift from controlled toward automatic processing. Furthermore, it is explained that intentional learning, for example, by means of explicit instruction and corrective feedback, "can play a role in the controlled phase, and through practice or repeated activation, become automatized over time". In other words, explicit learning and explicit knowledge from instruction and corrective feedback can be converted to implicit knowledge considered necessary for acquisition, as clearly summarised by Bitchener (2012, p. 350).

Anderson's (1993) ACT (Adaptive Control of Thought) model is similar to McLaughlin's model in that "it centres on the belief that practice leads to automatization". However, it is this model that specifically refers to the role of explicit knowledge (including that which can be gained from explicit corrective feedback) and implicit knowledge in learning. Anderson refers to explicit knowledge as declarative knowledge (knowledge *that*) and to implicit knowledge as procedural knowledge (knowledge *how*). Thus, declarative knowledge is the type of knowledge that Krashen refers to when he defines 'learning' and "the type of knowledge that he claims is not able to be acquired as automatized procedural knowledge" (Bitchener & Ferris, 2012, p. 13).

The more important and controversial issue here is whether declarative knowledge can be converted into procedural knowledge in the L2 learning context. This has been debated over the years because, if the former cannot be converted into the latter, which is the ultimate goal of SLA, the role of instruction and corrective feedback should be brought into question. Anderson (1993) asserts that this can be possible because declarative knowledge can be converted to procedural knowledge through practice, which finally leads to automatization.

2.2.2.2 Skill acquisition theories

Skill acquisition theory is best represented in L2 acquisition by the work of DeKeyser (2001, 2003, 2007). It is a general theory from cognitive psychology that can be applied to all complex skills, not just language learning. The general idea is that there are three stages of development: 'declarative', 'procedural', and 'automatic'. The first involves "knowledge about a skill", the second "smooth and

rapid execution", and the third, "faster execution, with less attention, and fewer errors". The importance of feedback is that "it can provide explicit knowledge, help the learner focus on problem areas, and ensure that the wrong information is not proceduralized" (Polio, 2012, p. 381). According with this theory, being able to do something faster and with greater accuracy is evidence of learning. Thus, greater accuracy is considered a step toward acquisition. Declarative knowledge, which can include explicit knowledge, plays a role within this theory and it must become proceduralized through practice. Feedback, in addition, is helpful so that the learner does not proceduralize inaccurate language (Polio, 2012).

2.2.2.3 Interactionist theories

As agreed by many theoreticians, of all the theories that have something to say about the role of corrective feedback in L2 learning and acquisition, the interactionist perspective has arguably the most to offer. Interactionists explain first the role of 'input', 'output', and 'feedback' in L2 learning. Input can be in the form of positive evidence (about what is acceptable in the L2) and negative evidence (about what is not acceptable in the L2). Unlike Krashen, they claim that exposure to L2 input alone is not sufficient for language learning and that learners need to be 'pushed' to produce modified output in oral interactions (Long, 1996; Swain, 1985, 1995). In this regard, they argue that corrective feedback has an important role to play. They add, however, that if a linguistic form is to become incorporated into a learner's developing L2 system as L2 'intake', learners need to pay 'attention' to form when receiving input, including corrective feedback, and most crucially when producing output (Schmidt, 1990, 1994; Swain, 1985, 1995).

Schmidt (2001) distinguishes between different types of attention when explaining the conditions upon which corrective feedback can be used for learning: 'noticing', which refers to "the process of registering that there is a mismatch or gap between a learner's interlanguage output and the target L2 input", including corrective

feedback, 'understanding' and 'awareness', which refer to "explicit knowledge, for example the understanding and awareness of a particular grammar rule". He claims that if a learner 'attends', the potential exists for corrective feedback to be converted to 'intake' and that the internalization process enables this "to be stored in the learner's long-term memory for retrieval over time" (Bitchener, 2012, p. 351). Schmidt (2001) adds that the amount of attention a learner pays to feedback may determine the extent to which it becomes 'intake' and that the extent to which this occurs may be determined by a range of mediating factors, including individual cognitive (e.g. the learner's working memory, developmental or proficiency level), motivational, and affective factors. Important to notice, "not only may they influence whether or not there is 'uptake' from the corrective feedback, they may also determine the extent to which consolidation occurs", as explained by Bitchener (2012, p. 351).

2.2.2.4 Socio-cultural theory

Socio-cultural theory (SCT) provides a different perspective on the role of interaction in L2 learning and is noteworthy for the kind of insights it offers about the learning process, including how learners respond to and use (or fail to respond to and use) the corrective feedback they are given. Based on the work of Vygotsky (1978, 1981), it is assumed that all cognitive development (including language development) occurs as a result of social interactions between individuals. For language learners, Bitchener (2012, p. 352) outlines, this is believed to occur especially when they have "opportunities to collaborate and interact with L2 speakers who are more knowledgeable than they are", for example teachers and more advanced learners.

Lantolf and Thorne (2007), among other researchers, have suggested that L2 learners can achieve higher levels of linguistic knowledge when they receive appropriate 'scaffolding' (including contrastive feedback) and that "the assistance of

this 'other regulation' can eventually enable learners to be 'self-regulated', which means to be able to use the L2 independently and autonomously" (Bitchener, 2012, p.352). In particular, it is believed to be most effective in the learner's 'zone of proximal development' (ZPD), understood as the point at which learning is possible. As to provide a concrete example, a study illustrates the potential role that corrective feedback can play in this socially mediated learning process. Aljaafreh and Lantolf (1994) used a 'regulatory scale' to show how a tutor's interventions involved more implicit than corrective feedback as learners became more independent and selfregulated. They argued that this reduced need for other-regulation constitutes evidence of language development within the learner's ZPD.

Another concept from SCT, known as 'Activity Theory', is important for understanding why contrastive feedback may or may not be responded to in writing activities. Developed by Vygotsky's colleague, Leontiev (1981), it identifies three levels in an activity: the "motives" (beliefs and attitudes) which elicit the activity, the "actions brought about by goals to achieve the action", and the "conditions or operations" under which the activity is carried out. According to this theory, each of these levels may account for why some learners engage with corrective feedback while others fail to do so when doing a writing task or the way in which a written activity is performed or not performed. As paraphrased by Bitchener (2012, p. 352), considering the mediating role of particular learner goals in performing a written task, some learners may focus on accuracy and "be keen to learn from the corrective feedback they are given" while others may focus on fluency and content and "be less inclined to attend to and respond to corrective feedback". To conclude, SCT, while it is predictive of the role that mediation can play in the learning process of any L2 learner, also offers an approach that might be especially helpful for learners who need more scaffolding (Bitchener, 2012, p. 352).

2.3 Written Corrective Feedback: types of error and types of feedback

Corrective feedback constitutes one type of negative feedback. It takes the form of a response to a learner utterance containing a linguistic error. The response is another initiated repair and can consist of (1) an indication that an error has been committed, (2) provision of the correct target language form, (3) metalinguistic information about the nature of the error, or any combination of these (Ellis et al., 2006). However, before deciding on which type of feedback should be provided, two important issues need to be addressed. In the first place, attention must be given to which specific errors should be corrected, whether 'treatable' or 'untreatable' errors. In the second, whether CF should be 'focused' or 'unfocused' also deserves special attention.

2.3.1 Treatable and Untreatable Errors

Ferris (1999) introduced a pedagogical distinction between 'treatable' and 'untreatable' errors, suggesting that the former (verb tense and form, subject-verb agreement, article usage, plural and possessive noun endings, and sentence fragments) occur in a "rule-governed way", and so learners can be pointed to a grammar book or set of rules to resolve the error, while the latter (word choice errors and unidiomatic sentence structure, resulting from problems to do with word order and missing or unnecessary words) are "idiosyncratic" and so require learners "to utilize acquired knowledge of the language to correct the error" (Ferris, 2003, p. 51). On the one hand, Ferris (2006) found that teachers tended to mark the so-called untreatable errors differently than treatable ones. On the other hand, Ferris and Roberts (2001) also showed that students were able to self-edit untreatable errors when called to their attention but at a lower rate than treatable errors.

2.3.2 Focused and Unfocused Feedback

Though the terms 'focused' and 'unfocused' have been characterized in various ways by researchers over the years, they essentially distinguish between "feedback that is targeted to specific error types or patterns", and "correction of any and all problems observed in the text without a preconceived feedback" (Ferris, 2011, p. 30). Similarly, according to Ellis (2009a, p. 102), teachers can elect to "correct all of the students' errors", in which case the corrective feedback is unfocused, or they can alternatively "select specific error types for correction" through focused feedback.

The types and numbers of error categories in research studies have varied widely, from only two or three categories, such as articles or prepositions (e.g. Bitchener et al., 2005; Bitchener & Knoch, 2009, 2010; Ellis et al., 2008; Sheen, 2007) to five or more categories such as verbs, noun endings, or sentence structure (e.g., Ferris & Roberts, 2001; van Beuningen et al., 2008), or as many as fifteen categories (e.g., Ferris, 2006). Another approach towards research employing focused feedback deals with markings the students' most frequent error patterns on a piece of writing completed at the beginning of the course, providing systematic feedback on those error patterns, and tracking students' progress over time (e.g., Ferris, 1995; Ferris, 2010). In both types of research, the principle or assumption is the same:

...a comprehensive, yet vague approach to written corrective feedback, compared with selective treatment of targeted error types, is less likely to yield empirically robust findings and be pedagogically effective. It only makes sense that students would utilize written corrective feedback more effectively for long-term language acquisition and writing development when there are fewer, clearer error types on which to focus attention. (Ferris, 2010, p. 182)

In other words, as Ellis (2009a) explains, processing corrections is likely to be more difficult in unfocused corrective feedback as "the learner is required to attend to a variety of errors and thus is unlikely to be able to reflect much on each error". In this respect, focused corrective feedback may prove more effective as "the learner is able to examine multiple corrections of a single error" and thus obtain the rich evidence they need to both "understand why what they wrote was erroneous and to acquire the correct form". If learning is dependent on attention to form, then it is reasonable to assume that the more intensive the attention, the more likely the correction is to lead to learning. However, unfocused corrective feedback has the advantage of addressing a range of errors, so "while it might not be as effective as focused corrective feedback in the short term, it may prove superior in the long run" (Ellis, 2009a, p. 102).

2.3.3 Direct and Indirect Feedback

Based on the presumption that error correction is helpful to students, many researchers have focused primarily on trying to identify the most effective mechanisms and strategies for giving error feedback. Thus, rather than contrasting the writing of students receiving no error feedback with the texts of those who do, many studies of error correction instead examine the effects of varying types of feedback on student accuracy, as I do in this study. According to Ferris (2011, p. 29), the most important dichotomies in written corrective feedback are the effects of 'direct' and 'indirect' feedback.

When instructors provide the correct linguistic form for students, for example: word, morpheme, phrase, rewritten sentence, deleted word(s) or morpheme(s), this is referred to as 'direct' feedback. Thus, when students revise or rewrite their papers after receiving teacher feedback, "they are expected merely to transcribe the

teacher's suggested corrections into their texts". 'Indirect' feedback occurs when the teacher indicates in some way that an error has been made, by means of an underline, circle, code, or other mark, but does not provide the correct form, "leaving the student to solve the problem". These marks can be made in the student's text or by placing them in the margin next to the line containing the error. Thus, this involves deciding whether or not to show the precise location of the error (Ferris, 2011, p. 31). In the former case, the student has to work out the correction needed from the clue provided while in the latter the student first needs to locate the error in the line and then work out the correction.

In his typology of corrective feedback types, Ellis (2009a) includes another type of feedback to the 'direct' vs. 'indirect' feedback dichotomy: this is 'metalinguistic' corrective feedback, which involves providing learners with some form of explicit comment about the nature of the errors they have made. However, according to the way in which the explicit comment is made, this metalinguistic feedback has been also understood as a type of 'direct' or 'indirect' feedback by other researchers, since it can be marked by the use of error 'codes' (in which case it would be considered 'indirect') or by metalinguistic explanations of the errors (as a more 'direct' kind of feedback).

Understood as a type of indirect feedback, metalinguistic codes consist of "abbreviated labels for different kinds of errors", such as 'PR' for pronouns, 'VT' for verb tense, etc. As for the second type, Bitchener and Ferris (2012, p. 65) state that 'direct' corrective feedback "has recently included written meta-linguistic explanations: the provision of grammar rules and examples of correct usage". This type of feedback is not very common, perhaps because it is much more time consuming than using error codes and also because it calls for the teacher to show sufficient metalinguistic knowledge to be able to write clear and accurate explanations for a variety of errors.

Chapter 3: Methodology

3.1 Participants and instructional context

Data for this longitudinal, small-scale study was collected along three months from an EFL class at a private English language institution in Santa Rosa, La Pampa, Argentina. Fifteen students aged between 15-16 years old, whose L1 is Spanish, were involved in the study. These students regularly attend classes twice a week for periods of one hour and a half (three hours a week) throughout the year. Students have been attended EFL classes for between 5 and 6 years and they are completing the first year of a two-year training course aiming at sitting for the *First for Schools* exam, which is awarded by the University of Cambridge (UK) through its Language Assessment programme (http://www.cambridge_english.org/exams/first-forschools).

The *Cambridge English: First for Schools* exam is a rigorous and thorough test of English at Level B2 of the *Common European Framework of Reference for Languages* (CEFR). Preparing for taking this exam helps candidates develop the skills they need to use English to communicate effectively in a variety of practical contexts. The exam includes four papers: 'Reading & Use of English', 'Writing', 'Listening' and 'Speaking'. The overall performance is calculated by averaging the scores achieved in each part, and the weighting of each is equal (UCLES, 2014). Based on the scores achieved by students from the institution who had taken the exam in previous years, it was noticed that 'Writing' appears, together with 'Use of English', as the area in which students usually show more difficulties and get lower scores.

As regards the tasks included in the 'Writing' paper, candidates have to provide answers for two questions. Question 1 requires students to write an Essay, while in Question 2 students have to choose among different options: an Article, an Email/Letter, a Review or a Story. Both texts should be 140-190 words long. Cambridge examiners in UK mark the writing tasks using an assessment scale that was developed with explicit reference to the *Common European Framework of Reference for Languages* (CEFR). The writing scale consists of four subscales: 'Content', 'Communicative Achievement', 'Organisation', and 'Language'. 'Content' focuses on how well candidates have fulfilled the task, in other words, if they have done what they were asked to do and if all content is relevant to the task. 'Communicative Achievement' focuses on the use of the appropriate register for the task as well as the conventions to hold the target reader's attention. 'Organisation' focuses on the way the candidate puts ideas together, in other words if the text is logical and ordered though the use of cohesive devices and organisational patterns. 'Language', finally, focuses on the use of appropriate vocabulary and grammar. This includes the range of language as well as how accurate it is (UCLES, 2014). Responses are marked on each subscale from 0 to 5.

Due to the fact that the institution where this study is carried out has been recognised as an official *Cambridge Exams Preparation Centre*, students are given the chance to be evaluated by Cambridge assessors in UK throughout 'pre-testing' sessions some months before the date of the exam. Pre-testing practice is sent to the institution some moths before the real exam. Then, once students participate in the pre-testing sessions, the tasks are sent back to UK for their correction. In this way, students receive useful feedback before deciding whether to sit for the real exam or not. Evidence from 'Writing' pre-testing sessions carried out in the institution during previous years shows that most students get lower scores in the subscale for 'Language', that is, grammar and vocabulary use, in comparison with the higher scores they usually receive for the other aspects, namely 'Organization', 'Content' or 'Communicative Achievement' (anonymised copies of feedback sent by Cambridge pre-testing evaluators in UK have been included in Appendix II).

Three last important aspects need to be considered as regards the participants. First, the fact that most of them took the *PET for Schools* (B1 Level) exam the year before this study was carried out; furthermore, those who did not take this exam had equally shown the same proficiency level through scores received on pre-testing sessions or diagnostic tests. This is important in order to show that all the participants share a similar L2 background, despite individual differences. Second, it is also essential to highlight that all the participants are familiar with the already mentioned assessment scales and scores and are used to receiving feedback from their teachers using those rubrics. Finally, the decision about including "withinsubjects" comparisons (the same participants under multiple conditions) instead of "between-subject" comparisons (different participants or groups under multiple conditions) has been made in order to minimize confounding variables among participants that might affect the reliability of the findings, as suggested by Blom & Unsworth (2010, p. 272).

3.2 Design

To answer the Research Questions stated above in terms of the output or product arising from a response to written corrective feedback (WCF from now on), the following three-stage design has been employed:

Pre-test
Treatment (provision of WCF)
Post-tests

This design aims at comparing accurate performance before WCF is provided on errors (pre-test writing task) with performance immediately after receiving WCF (immediate post-test writing task) and at various periods of time thereafter (delayed post-tests). It is important to mention that the comparison between the pre-test writing task and the immediate post-test writing task includes the revision of the pre-test writing task but also the writing of a new text. If learners in the groups that receive WCF reveal a significant increase in accuracy between their pre-tests and immediate post-test, "it is understood that WCF has, at least, begun to facilitate the learning process". If accuracy levels increase and this is maintained in delayed post-tests, "it is understood that learning is in the process of being consolidated" (Bitchener & Storch, 2016, p. 36).

According to Liu and Brown (2015) in their analysis of design features that are specific to WRC studies, the most common design includes a control group and one or multiple comparison groups. This study, however, goes in tune with the second most popular design type: that which compares various types of form-focused corrective feedback without the inclusion of a control group. This methodological decision was made taking into account the fact that my starting point, or initial hypothesis, is that WCF does help students to improve their texts on an accuracy basis. Thus, there is no need to include a control group. As Liu and Brown (2015, p. 74) claim, while some scholars are still "trying to address the fundamental question of whether corrective feedback plays a role in the development of L2 written accuracy", most of them have "moved a step forward from the yes-no question to explore which types of corrective feedback are more effective than others in treating L2 errors", as the case for the present study is.

During the first week of the study (Week 1) the fifteen students were given a set of similar tasks to choose from so as to write three informal letters. They were supposed to submit the three letters on the same day. Each of the three texts was marked following one of the corrective feedback strategies proposed: one letter was corrected using direct feedback (DF), the other one was corrected using indirect feedback with coding and location of the errors (ICL) and the third one was

corrected using indirect feedback with coding but with no location of the errors (ICNL). The three corrected letters were given back to the students at the same time, usually the following week. In line with Liu's & Brown's (2015, p. 74) analysis, in most WCF studies the intervals between writing assignments and feedback provision are mostly within a week, which reflects "real classroom circumstance considering how time-consuming it is to give quality feedback". After the provision of WCF, students were asked to re-write the three letters and submit their second drafts within the following week (Week 3). The same procedure was followed for the writing of stories during the second month of the study (the first draft was submitted on Week 5 and the second draft on Week 7), and for the writing of essays during the third and last month of the study (the first draft was submitted on Week 9 and the second draft on Week 11). To sum up, each participant wrote eighteen texts (three letters, three stories and three essays and all their corresponding second drafts). Consequently, two hundred and seventy texts comprising 45,008 words were collected and analysed at the end of the study.

3.3 Feedback types

As previously stated, there is no substantial agreement on what the best way to approach WFC is. In addition, the feedback typology suggested by researchers may also have its greys. Bitchener and Ferris (2012, p. 64) explain that "in the past years the categorization of feedback types has been expanded to include a more finegrained consideration of subcategories along the direct-indirect spectrum". As explained in Chapter 2, most of the studies into the relative effectiveness of different types of WCF are focused on comparing 'direct' and 'indirect' types of feedback. Then, the explicitness of indirect feedback provided gives rise to many different typologies, such as 'coded' and 'non-coded' errors, 'located' and 'non-located' errors, etc. According to Liu and Brown (2015), eleven types of treatments were identified in the 44 studies they reviewed. Such a wide variety in treatment types reflects the wide range of techniques used by practitioners and researchers. As Ellis (2009b, p. 106) states, "typologies of error might be of assistance to teachers". Moreover, teacher handbooks such as Ur's (1996) do not attempt to prescribe how teachers should apply WCF. Instead, they invite teachers to develop their own correction framework. What is important, however, is for teachers to have a clear and explicit account of the options available to them.

Studies that have investigated the relative merits of these approaches have tended to be grouped according to those that have compared "direct and indirect types of WCF" as well as "different types of indirect feedback" (Ferris & Robers, 2012, p. 164). This previously adopted comparisons and the fact that the three most popular types of CF employed in previous studies are 'direct correction', 'error coding', and 'error location', as Liu and Brown have surveyed (2015), provide solid grounds for the methodological decision to compare the effects of direct feedback (DF), indirect coded feedback with error location (ICL), and indirect coded feedback with no error location (ICNL) in this study.

Direct feedback (DF) took the form of full, explicit corrections above the underlined errors, as in the following example:

so exited becouse I conductition. toke port in T a course tavine month ago and ion yesterday ushen my arandmother toyed in to should and me and U started had won motorlecke. I con T school by rooter or he more unale

Indirect feedback with the provision of error codes and location (ICL) was marked by underlining the error and providing the code, as in this example:

Hello Bourn Jorry because glizen prozed upy or your that was known that ond nave enough time to mel tha here teacher 0000 me ond Stra competition Philene à because erasy for me and i of anon your t Nord grades at mai three hairs every to practice First prize! It was a motorblike and it's amoging! because I would go to school by motor blue 13 less time than by bus

Finally, indirect feedback with the provision of the error codes but without location of the errors (ICNL) was marked by writing the code in the margin of the line where the error is found, as in this example:

PR len 21 years old really eccol course keen the house he cooles. 15 duaus aluques help me with slv and 2 meriork sometimes art znary with him because he puts PR too loud tro mist and is enhaving VT Since I'm living here there char manu my life all I have to un 00 00 Or dont have an place mis conents VT Shubhere. F friends tough miss mu end in not VT with my above shore becourse Kusen,

A random sample text from each feedback type on a different task was included in Appendix I, while the 270 texts have been scanned and included in Appendix II.
3.4 Targeted linguistic errors

As stated before, some decisions need to be made as regards which errors to correct. This includes deciding whether to use 'focused' or 'unfocused' feedback and whether to mark 'treatable' or 'untreatable' errors. Several studies refer to comprehensive corrective feedback (i.e., unfocused) as "traditional feedback", implying that teachers most commonly supply feedback to all errors in students' writing. Conversely, studies that examine highly focused corrective feedback are more SLA-oriented and often involve tightly controlled design with a pre-test, error treatment, and a post-test or delayed post-test(s), as in this study. In general terms, focused corrective feedback given to specific error types has been proved to be more valuable than comprehensive correction of all types of errors (Sheen, 2007; Bitchener & Knoch, 2010; van Beuningen et al., 2012). However, it needs to be acknowledged that highly focused corrective feedback studies, though often more methodologically rigorous, have limited 'ecological' value as the purpose of feedback in L2 classrooms is generally to help students improve overall accuracy rather than accuracy of a single linguistic form or structure (Ferris, 2010; Storch & Wigglesworth, 2010).

As noted in several previous studies (Ferris, 2006), the efficacy of certain WCF methods also depends on error categories, meaning that some types of errors may be more 'treatable' than others, as explained above. Based on the fifteen error categories identified by Ferris (2006), seven of them, with their corresponding codes, have been selected for this study, as representative of typical errors made by students of this specific context in previous diagnostic tests and pre-testing sessions. These categories are: verb tense (VT), verb form (VF), word form (WF), articles (Art), singular-plural (S/P), pronouns (PR), and subject-verb agreement (SV). It is important to mention that, as stated in the Introduction of this work, due to scope

and length restrictions, the effects the different feedback strategies have on these different types of errors will not be considered.

3.5 Writing tasks

As outlined before, each participant completed nine writing tasks (first drafts) at the beginning of each stage (Month 1, Month 2, Month 3). Participants also wrote nine more corrected texts (second drafts) after each text had been provided with WCF. Three different text types were chosen for each stage graded according to the level of students' familiarization: from the most common to the most recently learnt. Informal letters were asked to be written first. This text type was very familiar for students since it is requested for the two previous Cambridge exams they previously took or were prepared for: *Key English Test* (KET, A2 Level) and *Preliminary English Test* (PET, B1 Level). Then, stories were assigned in the second stage of the study. Students were also familiarised with this type of genre since it was also a compulsory composition for the PET exam. Finally, in stage 3, students were asked to write an essay, which had not been previously taught because it was not required for the previous exams (see Appendix I for sample tasks assigned to participants).

The decision about not using the same genre on the three instances of the study is also rooted in methodological aspects, since it has been considered a limitation in previous studies. According to Bitchener and Knoch (2009, p. 209), the repetition of the same writing task in different stages "does not include opportunities for learners to demonstrate their ability to perform with the same level of accuracy when writing in other genres". It is advisable then to include such opportunities in at least one of their delayed post-tests, as I have done in this study. It is important to add that no explicit instruction on the targeted linguistic errors was given between the writing tasks and that students were completely familiarized with the assessment criteria provided and the three corrective feedback strategies employed.

3.6 Analysis

In order to address RQ1, errors in the informal letters (Task 1) were analysed from the first to the second draft according to the three marking strategies employed. As stated before, not only the second draft of Task 1 but also the first draft of Task 2 (a new text, the story in this case) was also considered in comparison with the first draft of Task 1.

When RQ2 was addressed, errors in the second drafts of the letters (the revised texts from Task 1) were compared with the errors in the second drafts of the essays (Task 3). Comparisons of errors between the revised letters and the revised short stories as well as errors between the revised short stories and the revised essays were also analysed so as to shed light on changes during the transition period.

Finally, aiming at addressing RQ3, errors corrected in all the texts were classified according to the marking strategy they resulted from. Then, the effects of the three strategies: direct feedback (DF), indirect feedback with coding and location of errors (ICL), and indirect feedback with coding but no location of error (ICNL) were compared and contrasted in the short and in the long-term writing processes.

As already done in earlier studies exploring the effectiveness of WCF (e.g. Chandler, 2003; Truscott & Hsu, 2008), I used error frequency ratio per 1,000 words to measure overall accuracy. The ratio was calculated like this: number of errors/the total number of words x 1,000. Furthermore, accuracy was also measured through percentages (%) of correct usage after WCF was employed. For example, three corrected errors in the second draft from ten existing errors in the first draft meant 30% of improved accuracy.

Chapter 4: Results and Discussion

4.1 Effectiveness of Written Corrective Feedback in the short-term process

In their experimental study, Ferris and Roberts (2001) highlight the need to check the effect of WCF on students' immediate edition of texts. They put doubt on Truscott's (1996, 1999) idea that only longitudinal WCF research is worth carrying out and claim that the process of revision/edition (addressed as 'short-term' in the present work) would positively contribute to the study and understanding of WCF effects. Furthermore, it has been argued that immediate revision would also provide useful information for further long-term studies (Ferris & Roberts, 2001, Ferris, 2006). Similarly, Bitchener and Storch (2016, p. 36) assume that when learners are asked to revise their texts after they have been given WCF, teachers should expect to see "if they have learnt anything from the feedback and if they can then make accurate use of the learning in revising their texts". Thus, if an error is revised accurately, "it is assumed that the learner has probably understood the feedback". However, whether or not this constitutes L2 development is, as previously stated, open to debate. Nevertheless, it may signal that learning or development has been initiated, but unless the learner is given the opportunity to draw upon such knowledge when writing new texts over time, it is impossible to know whether the real learning process has begun.

Following the above considerations, and as explained in the Methodology section, during Week 3 of this study students were asked to submit an edited version (second draft) of each of the three letters (Task 1) they wrote in Week 1. Those first letters were corrected using the three types of WCF under analysis: direct feedback (DF), indirect coded feedback with location of the errors (ICL) and indirect coded feedback with no location of the error (ICNL). Then, in Week 5, students were asked to write and submit a new text, a story (Task 2) in this case. Thus, two different analysis need to be carried out. First, a comparison between the first drafts and the second drafts of the letters, so as to see if students were able to uptake their corrections and write more accurate texts. Second, a comparison between the first draft of the letter and the first draft of the story was carried out, to see if students were able to improve accuracy when writing a new, different text mediated by a short period of time.

Table 1 shows the results of the error frequency ratio, i.e. number of errors for each 1,000 words of text, in the three drafts of the first letter and in the three second drafts after revision, as well as the amount of error correction between drafts expressed with percentages.

1st Week				3rd Week				
First Draft	Number of Words	Number of Errors	Frequency of Errors	Second Draft	Number of Words	Number of Errors	Frequency of Errors	Error Reduction
								(%)
Letter 1	2459	89	36.19	After DF	2446	8	3.27	91.00%
Letter 2	2297	97	42.22	After ICL	2325	24	10.32	75.25%
Letter 3	2342	90	38.42	After ICNL	2307	36	15.60	60.00%
TOTAL	7098	276	38.88	TOTAL	7078	68	9.60	75.36%

 Table 1: Comparison between first and second drafts of Task 1 (Letters)

After analysing and contrasting the error frequency rate of the letters' first and the second drafts, it was found that students achieved a significant error reduction in their revised versions. From an average of 38.88 errors per 1,000 words, the rate diminished to 9.60 in the edited drafts. This means that 75.36% of the marked errors were corrected. These results are similar to those reported by several studies on the role of WCF in helping learners develop effective revision and editing skills (Ashwell, 2000; Fathman & Whalley, 1990; Ferris, 2006). In Ferris' (2006) study,

students made successful edits of about 80% of the errors marked by their teachers. Similarly, Fathman and Whalley (1990) found that fewer grammatical errors were made by students who received error feedback, and Ashwell (2000) also reported improved accuracy in text revisions. However, even when these studies have thrown positive evidence on accuracy improvement after the edition of texts, it is important to notice that they dealt with different types of errors. Fathman & Whalley (1990) corrected all types of errors, Ashwell (2000) focused on form but also on content, and Ferris (2006) analysed treatable vs. untreatable errors. As stated before, the present study only focused on some treatable errors, i.e. grammatical categories. Nevertheless, challenging Truscott's (1996) original claim that teacher's feedback would be futile to produce students' understanding of their grammar errors, these results show that students are able to uptake corrections and self-edit their pieces of work, thus showing improved accuracy.

However, as argued by Polio et al., (1998), and Truscott and Hsu (2008), the revision of a text is not necessarily evidence of learning. So as to demonstrate whether revised accuracy can be predictive of learning, I investigated whether improved accuracy in a text revision was also evident in the writing of a new text after a short time. For that, the error frequency ratio in the first drafts of the letters was compared with the ratio in the first drafts of the story, as shown in Table 2.

1st Week				5th Week			
First Draft	Number of Words	Number of Errors	Frequency of Errors	First Draft	Number of Words	Number of Errors	Frequency of Errors
Letter 1	2459	89	36.19	Story 1	2783	88	31.62
Letter 2	2297	97	42.22	Story 2	2367	75	31.68
Letter 3	2342	90	38.42	Story 3	2299	76	33.05
TOTAL	7098	276	38.88	TOTAL	7449	239	32.08

Table 2: Comparison between first drafts of Task 1 (Letters) and first drafts of Task 2 (Stories)

Findings show that the total number of errors went from an average of 38.88 per 1,000 words on the first draft of the letters to 32.08 on the first draft of the stories. Thus, there was a reduction of 6.8 errors per 1,000 words in total. When these results are compared with other similar studies, different conclusions can be drawn. On the one hand, Truscott and Hsu (2008) reported that the accuracy improvement shown on the revision of a text was not evident when their learners wrote a new text. They concluded that WCF is not useful as a learning tool even though they acknowledged that it might have some limited, short-term value as an editing tool. However, reflecting on this conclusion, Bruton (2009) questioned whether such a claim was valid because the learners had made very few errors in their first piece of writing, leaving little room for improvement. Important to mention, this has not been the case in the present study, where students made a considerable number of errors in each first draft. On the other hand, the findings by van Beuningen et al. (2012) contradict those reported by Truscott and Hsu (2008). In their study, both treatment groups (direct error correction and error code) improved their accuracy in the text revision and in the writing of a new text one week later, thus resembling the results reported in this study.

In the light of the findings described, the first Research Question (RQ1) addressed in this study might be answered in a positive way: WCF does help students, to a certain extent, to improve accuracy in the short-term revision process. Then, it can also be argued that any opportunity to hypothesise and produce output may be facilitative of the learning process. As Ferris (2004, p. 53) argues, "the cognitive investment of editing one's text after receiving error feedback is likely a necessary, or at least helpful, step on the road to longer term improvement in accuracy".

4.2 Effectiveness of Written Corrective Feedback in the long-term process

As stated before, a call for more exhaustive and longitudinal studies of corrective feedback to test accuracy over time has been acknowledged. The study of long-term effects might show the efficacy of WCF in providing students with the cognitive tools to develop a full awareness of the feedback they receive so that they can make proper use of them, not only in an immediate post-test, but also after a period of time. The incidence of WCF after a period of three months is shown in Table 3.

1st Week			3rd Week					
First Draft	Number of Words	Number of Errors	Frequency of Errors	Second Draft	Number of Words	Number of Errors	Frequency of Errors	Error Reduction (%)
Letter 1	2459	89	36.19	After DF	2446	8	3.27	91.00%
Letter 2	2297	97	42.22	After ICL	2325	24	10.32	75.25%
Letter 3	2342	90	38.42	After ICNL	2307	36	15.60	60.00%
TOTAL	7098	276	38.88	TOTAL	7078	68	9.60	75.36%
5th Week				7th Week				
First Draft	Number of Words	Number of Errors	Frequency of Errors	Second Draft	Number of Words	Number of Errors	Frequency of Errors	Error Reduction (%)
Story 1	2783	88	31.62	After DF	2807	9	3.20	89.77%
Story 2	2367	75	31.68	After ICL	2393	24	10.02	68.00%
Story 3	2299	76	33.05	After ICNL	2295	27	11.76	64.00%
TOTAL	7449	239	32.08	TOTAL	7495	60	8.00	74.89%
9th Week				11th Week				
First Draft	Number of Words	Number of Errors	Frequency of Errors	Second Draft	Number of Words	Number of Errors	Frequency of Errors	Error Reduction (%)
Essay 1	2851	78	27.35	After DF	2872	11	3.83	85.89%
Essay 2	2564	96	37.44	After ICL	2589	20	7.72	79.16%
Essay 3	2532	65	25.67	After ICNL	2480	15	6.04	76.92%
TOTAL	7947	239	30.07	TOTAL	7941	46	5.79	80.75%

Table 3: Longitudinal comparison of first and second drafts of Task 1, Task 2 and Task 3

The error frequency rate found in the first draft of the three letters (Task 1) written at the beginning of the study was compared with the error frequency rate found in the first drafts of the three essays (Task 3) written in the last stage of the research. By comparing the rates in both stages, it was expected to find relevant information as regards the effect of WCF in the long-run.

Findings show that the total number of errors went from an average of 38.88 per 1,000 words in the first drafts of the letters (Task 1) to 30.07 in the first drafts of the essays (Task 3). Thus, students achieved an average reduction of 8.81 errors per 1,000 words between both initial and final stages. For a deeper understanding of the process the students went through, it is also worth analyzing the error frequency variation between the first drafts of the letters (Task 1) and the first drafts of the stories (Task 2), as already done to evaluate the effectiveness of WCF in the short term in 4.1, in comparison with the variation between the first drafts of the stories (Task 2) and the first drafts of the essays (Task 3). Table 3 shows that the number of errors went from an average of 32.08 per 1,000 words in the stories (Task 2) to 30.07 in the essays (Task 3), showing an average reduction of 2.01 errors per 1,000 words between both stages. If we bring back the results of the average reduction between the letters (Task 1) and the stories (Task 2), which was 6.08 errors per 1,000 words, it is clear that the reduction rate is not linear; that is to say, it is not maintained in the same proportion form the revised letters at the beginning of the study in Week 3 through the revised essays at the end of the study in Week 11.

As regards the percentage of error reduction between the first and second drafts of each task, once the WCF strategies were employed, some interesting findings arose. While students were able to correct 75.36% of their errors from the first to the second drafts of their letters (Task 1), they corrected 74.89% of their errors from the first to the first to the second drafts of their stories (Task 2). Contrary to what was expected, there was not an increase in the number of errors corrected by students from the first

to the second stage of the study. However, a different trend occurred when the last stage was considered, since findings show that students were able to correct 80.75% of their errors from the first to the second drafts of their essays (Task 3).

So far, two main conclusions can be reached. First, it has been found that there is not a linear upward pattern of improvement in the transition process from one time to another, more specifically from stage 1 to stage 2, as already mentioned. An explanation for this could be attributed to the type of text under analysis. Letters are text types that students had already practiced in previous years, as they are required in the KET (A2) and PET (B1) Cambridge exams, while stories are only required for the PET (B1) Cambridge exam. That is, students were more familiar with letters than with stories. As claimed by Bitchener and Ferris (2012, p. 88), "students may regress in ratios of formal error when the writing task is cognitively more difficult".

As shown, the accuracy level of the participants varied across the three writing times. This is not surprising as earlier research has shown that L2 learners, in the process of learning new linguistic forms, may perform them with accuracy on one occasion but fail to do so at other times (Ellis, 1994; Lightbown & Spada, 1999; Pienemann, 1989). Needless to say, individual variations among students might have also influenced the ways in which they addressed the tasks. As demonstrated by socio-cultural research (Coughlan & Duff, 1994; Lantolf & Appel, 1994), individual performance of the same task on different occasions can yield vastly different performance outputs as a result of the complex interaction of individual, situational and task factors. For example, the personal circumstances and daily experiences of individual learners can often have an effect on their motivation and attention-span and therefore mean that "the quality of their application may be less than is characteristic of other occasions" (Bitchener et al., 2005, p. 202).

The second, and perhaps more important conclusion is that WCF does help students to improve their writing accuracy level in the long-term process, that is, from the beginning of the study to the end of it, when three months had passed. Consequently, the second Research Question (RQ2) addressed in this study might also be answered in a positive way. Still more interesting is the fact that although the tasks were subsequently more cognitively difficult, mainly because the last task included a completely new text type only required for the FCE (B1) exam, the final error frequency ratio decreased and the final percentage of corrected errors increased, thus providing more solid grounds to our initial hypothesis. Furthermore, these findings are similar to those reported by recent studies investigating the effectiveness of written CF over time (Bitchener, 2008; Bitchener & Knoch, 2010; Ellis et al., 2008; Sheen, 2007; Ferris, 2006; Chandler, 2003, among others).

The improved accuracy in the immediate and delayed post-tests derived from the findings might provide clear evidence of uptake, thereby demonstrating that learners engage in the information-processing stages, as described by interactionist theoreticians. There would also be evidence that learners pay attention to the corrective feedback, notice it, understand the difference between their errors and the target-like version provided in the feedback, and are able to accurately use this knowledge in their writing of a new text immediately after corrective feedback but also after some time has passed. This is perhaps the most important outcome: "learners retain their levels of improvement over time, showing that they are able to retrieve the explicit knowledge gained from WCF and store it in their long-term memory and facilitating L2 acquisition". Furthermore, findings above might also be useful to demonstrate that a period of consolidation is required for learners to convert "their consciously processed explicit knowledge", which is demonstrated in immediate and delayed post-tests, to "unconsciously retrieved implicit knowledge", which is demonstrated through consistent accuracy on multiple occasions over time, as argued by Bitchener and Storch (2016, p. 41).

4.3 Effectiveness of different types of Written Corrective Feedback in the short and long-term processes

Once acknowledged that WCF can be useful in the short-term as well as in the longterm processes, the next step is going into a deeper analysis of the different feedback types applied in order to find out which of them might prove more effective and why according to the time variation between stages.

In the first stage of the study, during the Week 3, students received corrective feedback for the three letters they wrote. They were given direct feedback (DF) for Letter 1, indirect coded feedback with error location (ICL) for Letter 2, and indirect coded feedback without error location (ICNL) for Letter 3. As shown in Table 3 above, when students received direct feedback (DF), they successfully corrected 91% of the errors found in the first draft and the frequency error ratio went from 36.19 to 3.27 errors per 1,000 words. Thus, there was a reduction of 32.92 errors per 1,000 words. When indirect coded feedback with error location (ICL) was applied, students were able to correct 75.25% of their errors from the first draft and the frequency error ratio went from 42.22 to 10.32 errors per 1,000 words. This time the reduction was of 31.90 errors per 1,000 words. Finally, when students received indirect coded feedback without error location (ICNL), they were able to correct 60% of their errors and the frequency error ratio went from 38.42 to 15.60 errors per 1,000 words, showing a reduction of 22.82 errors per 1000 words.

In the second stage of the study, during Week 7, students' stories were given corrective feedback. When students wrote Story 1 they received direct feedback (DF), they received indirect coded feedback with error location (ICL) for Story 2, and they were given indirect coded feedback without location of the error (ICNL) for Story 3. Results show that when students received direct feedback (DF), they successfully corrected 89.77% of the errors marked in the first draft and the

frequency error ratio went from 31.62 to 3.20 errors per 1,000 words. Thus, there was a reduction of 28.42 errors per 1,000 words. When indirect coded feedback with error location (ICL) was applied, students were able to correct 68.00% of their errors from the first draft and the frequency error ratio went from 31.68 to 10.02 errors per 1,000 words. This time the reduction was of 21.66 errors per 1,000 words. Finally, when students received indirect coded feedback with no error location (ICNL), they were able to correct 64% of their errors and the frequency error ratio went from 33.05 to 11.76 errors per 1,000 words, showing a reduction of 21.29 errors per 1,000 words.

Finally, in the third and last stage of the study, during Week 11, the essays were provided with corrective feedback. When students wrote Essay 1 they received direct feedback (DF), they received indirect coded feedback with error location (ICL) when they wrote Essay 2, and when they wrote Essay 3 they received indirect coded feedback without error location (ICNL). Results show that when students received direct feedback (DF), they successfully corrected 85.89% of the errors marked in the first draft and the frequency error ratio went from 27.35 to 3.83 errors per 1,000 words. Thus, there was a reduction of 23.52 errors per 1,000 words. When indirect coded feedback with error location (ICL) was applied, students were able to correct 79.16% of their errors from the first draft and the frequency error ratio went from 37.44 to 7.72 errors per 1,000 words. This time the reduction was of 29.72 errors per 1,000 words. Finally, when students received indirect coded feedback with no error location (ICNL), they were able to correct 76.92% of their errors and the frequency error ratio went from 25.67 to 6.04 errors per 1,000 words, showing a reduction of 19.63 errors per 1000 words. A summary of these findings has been illustrated in Figures 1 and 2:



Figure 1: Effectiveness of feedback types over time (I)



Figure 2: Effectiveness of feedback types over time (II)

As clearly seen, the most effective feedback type was direct feedback (DF), followed by indirect coded feedback with error location (ICL) and then without error location (ICNL). This superiority of direct feedback is sustained throughout the three stages, although its level of effectiveness slightly decreases throughout Stages

2 and 3. Furthermore, the difference with the other two types of feedback varies considerably from one stage to the other. It is in Stages 1 and 2 where direct feedback proves to be more effective that the other types of feedback. These findings resemble previous research demonstrating that direct feedback is the most efficient type of feedback for students to successfully edit or revise their texts (Chandler, 2003; Ferris, 2006; Hyland & Hyland, 2002; van Beuningen et. al., 2012; Bitchener & Knoch, 2010).

Interesting for comparison with the results obtained in this study, the study by Ferris (2006) is unique because it looked at the effects of different feedback treatments both in the short term (from one draft of a paper to the next) and in the long run (from the beginning to the end of the semester), following the same methodological path that was carried out in the present work. Ferris (2006) found that in the short term, direct feedback led to more correct revisions (88%) than indirect feedback (77%). However, over the course of the semester, students who received primarily indirect feedback reduced their error frequency ratios substantially more than the students who received mostly direct feedback. Again, because direct feedback is easier for students to act on and requires less knowledge and effort on their part, it is not surprising that from one draft of a paper to the next it would show more positive effects than indirect correction.

Researchers have explained the higher effectiveness of direct feedback due to the fact that it is more economical, that is, less time consuming and less effort demanding: "It seems safe to assume that students would be more successful in incorporating direct feedback into their revisions, since it involves mere transcribing or copying the teacher's suggestions into the next draft of their papers" (Chandler 2003, p. 280). Some other scholars in favour of direct feedback also suggest that it may be more helpful to learners because "it reduces any confusion they may experience if they are unable to understand what it is saying" and "provides them

with information to resolve more complex errors", "offers more explicit feedback on hypotheses that are tested by learners", and, of course, it is more immediate (Bitchener, 2012, p. 355). For these reasons, however, only lower proficiency learners may find direct feedback more beneficial than indirect. While these are certainly benefits of direct error correction, they may not be as helpful for learners who have partially acquired a particular form and really need more explanation and practice in "hypothesising and producing the correct structure themselves so that they can consolidate their knowledge and access it more automatically over time" (Bitchener & Storch, 2016, p. 18).

As regards the effectiveness of indirect feedback, some researchers suggest that learners benefit more from indirect corrective feedback because they have to engage in a more profound form of language processing when they are self-editing their writing (e.g. Ferris, 1995; Lalande, 1982). In this view, the value of the indirect approach lies in the fact that it "requires pupils to engage in guided learning and problem solving and, as a result, promotes the type of reflection that is more likely to foster long-term acquisition" (Bitchener & Knoch, 2008, p. 415). In other words, indirect feedback is more likely to foster deeper processing during the consolidation phase of the learning process. Learners at an advanced level of proficiency, as the participants in this study, for instance, may be able to draw upon a more developed linguistic repertoire and use this in determining what correction is appropriate, but for learners at a lower level of proficiency, this might not work as they may not have such an extensive linguistic knowledge base to draw upon.

As regards the difference between the two types of indirect feedback under analysis, that is, between coded feedback with location of the error and coded feedback without location of the error, findings indicate that coded feedback with error location was more efficient that non-located feedback, although the difference between both strategies was reduced with the passing of the time. That might

suggest that the location of the error is an important issue to consider in the longterm acquisition process. Ferris and Roberts (2001) claim that indirect feedback where the exact location of errors is not shown might be more effective than indirect feedback where the location of the errors is shown, as students would have to engage in deeper processing. Lee (2008), however, specifically compared the two types of indirect correction and found that learners were better able to correct errors that were indicated and located than errors that were just indicated by a check in the margin, but she did not consider long-term gains.

In order to shed some light on these differences, all the occurring errors in every single text were calculated. Then, the percentage of accurate revision instances was calculated together with the instances of incorrect changes (errors were revised but the change was not correct), and the instances where the error was just ignored and no correction took place, as shown in Table 4.

Feedback	Number of	Correct	Incorrect	No
Туре	Errors	Revision	Revision	Revision
Indirect Coded				
with Location	268	200	37	31
(ICL)		(74.64%)	(13.80%)	(11.56%)
Indirect Coded				
without Location	231	153	20	58
(ICNL)		(66.24%)	(8.65%)	(25.11%)

Table 4: Differences between indirect feedback types

The analysis is focused now on the errors that have not been corrected, since the location of the error, or not, might be showing different effects on the students' performance. The most interesting finding is the fact that when the location of the error was provided, students revised the error in an incorrect way (13.80%) or did not revise it at all (11.56%) in similar proportions. However, when the location of the error was not provided, the percentage of errors that were not noticed or

corrected was much higher (25.11%) in comparison with the errors that were incorrectly changed (8.65%). As a result, the lack of location of the error might be signalling a greater and more cognitively demanding effort on the part of the student to notice the error first and to try to find strategies to solve it later. To sum up, although in both cases the errors have not been transformed into correct output, there is a difference between the case in which a student notices the error, tries to correct it but is not able to do it in an appropriate way, and a case in which a student does not notice the error, or notices it but is unable to try any changes at all. An interesting line of future research might be open in this respect.

Chapter 5: Pedagogical implications

Providing error feedback on students' writing is a complex task, since it involves teacher's decisions about what constitutes an 'error', which errors to mark and how, when errors should be corrected and how corrective feedback fits in with other classroom choices, among other issues. A related aspect of pedagogical importance is the question about who should correct errors, since many suggestions have been made about the relative merits of teacher correction, peer correction, self-correction and electronic feedback, among others. Furthermore, in addition to providing error feedback on student's texts, the treatment of error in L2 students writing should also aim at incorporating strategy training to help students move toward autonomy in editing their own work. The key issue to have in mind here is the belief that our purpose as teachers should be to help students develop long-term, transferable writing skills, not to produce perfect texts in one try without any help.

5.1 Following the path towards self-correction

According to Ferris and Hedgcock (2014, p. 280), teachers can provide three general types of tools for their students to develop better self-editing skills. The first, as we have been discussing in this work, is 'corrective feedback' itself. Carefully constructed WCF can help students to edit their work in ways that not only "impact the text under immediate consideration but which build skills and awareness for subsequent writing tasks". The second tool is 'knowledge', or, specifically, focused instruction on specific points of grammar, usage, and language. If students have access to clearly taught, formally learned rules and sufficient contextualized practice they can use them to edit their work. The third tool is 'strategy training': there are specific techniques learners can use to edit their work more effectively, and teachers

can help them tremendously by presenting those techniques and giving them opportunities to apply them.

In order to reach this aim, Ferris and Hedgcock (2014, p. 281) also suggest a 'threephase process' through which learners can be trained to become independent, autonomous self-editors. The first phase is aimed at "helping students recognize the importance of improving their own editing and correction skills". That means that students should begin by identify their own sources of error. It is very common for L2 learners to show little interest in editing their texts. They may see it as not very important or they usually become overly dependent on their teachers to correct their errors. Thus, as Ferris (1995, p. 18) explains, "a crucial step in teaching students to become good editors is to convince them of the necessity of doing so". Thus, the design of consciousness-raising exercises with samples from students' own texts is an advisable way to start, as it will also serve to identify students' needs.

The second phase of the process focuses on providing strategy training. "Once the importance of accuracy and of developing self-editing tools has been established, specific strategies for self-editing need to be shared" (Ferris & Hedgcock, 2014, p 282). One of the most useful editing strategies that students can learn involves making separate, narrowly focus readings through texts to look for targeted error types or patterns. These categories may vary depending on the teachers' perception of students' needs and should be selected from 'frequent', 'serious', and 'stigmatizing' error types. Students are sensitized to these error patterns by reviewing the targeted categories, identifying them in sample students' texts, and looking for these errors in peer-editing exercises. Such activities can also lead students away "from the frustrating and often counterproductive notion that they can or should attempt to correct every single error in any given draft" (Ferris, 1995, p. 19).

Finally, the third phase involves asking students to find and correct their own errors. After they have been made aware of their unique weaknesses in editing through teacher and peer-feedback and have practiced identifying error patterns on model students' essays and peers' drafts, they should then be instructed to locate and correct errors in their own drafts. In addition, it is also advisable "to encourage students to track their own progress", through the keeping of error logs or similar strategies, since these have been suggested "to be at least potentially beneficial consciousness-raising tools" (Ferris & Hedgcock, 2014, p. 283). In the end, as the term progresses and students accumulate more and more editing practice, "the amount of edited feedback provided by the teacher should gradually decrease, with the editing task being turned over first to peer editors and then to student writers themselves" (Ferris & Hedgcock, 2005, p. 284).

To conclude, an important part of self-editing strategy training for the 21st century involves helping students make effective and appropriate use of computer-based and digital tools. Going back to one of the issues addressed at the beginning of this chapter, the question about 'who' should provide feedback acquires renowned importance as regards the advancement of technology for learning and teaching purposes.

5.2 Electronic feedback: a different way to pave the path

The WCF debate has been in the hot-spot for many decades and it is undeniable that the pedagogical effects need to adjust to the new generations of writers. Whenever we think about the adequacy for WCF it seems imperious to think about the role that new technologies play and the ways in which they can be useful to help teachers and students in the writing endeavour. Language learners are no longer the same learners Truscott referred to in his "*Case against grammar correction*" in 1996, more than two decades ago. The "paper-drive world" to which Harmer (2007, p. 13) makes reference has also changed and teachers need to develop new strategies to help students according to their needs and interests. In this sense, the rapid growth of educational technologies creates a broad spectrum of ways in which technology can be integrated into classroom instruction. These multiplying points of contact between technology and second language writing converge in the concept of "electronic feedback" (Ware & Warschauer, 2006, p. 105).

Electronic feedback is a slippery term that covers a range of often dissimilar approaches to the teaching of writing. According to Hyland, (2002, p. 78) "computer-aid learning permits different kinds of writing practices and teaching approaches, although these opportunities are often missed in a plethora of programs which automate and liven-up the delivery of traditional material". Thus, instructors can find difficult to choose from the variety of different pedagogical approaches and recommendations made by researchers and practitioners. In spite of the challenges involved, there is one aspect that must be called to attention: students of these times have been called to be 'digital natives'. Thus, Computer Assisted Language Learning (CALL) and Mobile Assisted Language Learning (MALL) constitute educational approaches that have arrived to stay for long.

As a way of illustrating the usefulness of electronic feedback, students whose texts were used as data for this study were introduced into the use of the website *Write & Improve* (www.writeandimprove.com), which was proved to be highly motivating and truly user-friendly since its launching in 2015. *Write & Improve* is a free website that provides on-line assessment for written-tasks. It is specially developed to guide and assists students of English who aim to prepare an international Cambridge Exam like the *First Certificate in English*. Students submit their written texts according to different tasks and text types provided and receive feedback in seconds as regards spelling, vocabulary, grammar, punctuation and general style. It also guides students with reference to the level they achieve according to the CERF

(*Common European Framework of Reference for Language*) and, if we go back to the four writing assessment criteria students need to pay attention to when writing their texts for the exam, this kind of feedback would be providing information about one of the subscales: 'Language' (Vocabulary & Grammar).

The type of feedback that *Write & Improve* provides can be described as 'indirect', since no correct forms for the errors are given to the students. Feedback is also 'coded' and 'located', because signs and colours are used as references on which the students can click and receive information about the possible causes for the error. Thus, the feedback provided by this program can be labelled as 'indirect coded feedback with location of the error', similar to one of the feedback types provided in this study. Needless to say, its specificity as regards the type of feedback provided and the required proficiency level of its users is completely adequate so as to meet the appropriate criteria to compare it with the written feedback given to students in this study.

Finding both error treatments so similar, several questions came to my mind. First, would have been possible to carry out this study using the tools provided by *Write & Improve*? Second, reflecting upon the ways in which these students, all 'digital natives', relate with the world and their peers: would have they felt more at easy, motivated and self-confident than writing and re-writing their texts on paper? Finally, would electronic feedback be more effective in the pursuit of improving students' writing accuracy? This last question, without any doubts, can only be answered thought evidence coming from scientific research, for what it might constitute an interesting area to investigate in the future. However, some preliminary answers for the first two questions can be drawn from the exploratory analysis that follows.

In order to compare the feedback provided by the website with the feedback I used in this study, I randomly selected three different first drafts from the three text types required (a story, a letter and an essay), and I submitted them to the *Write and Improve* programme. The letter was 118 words long and it contained eight errors (one for verb tense, two for verb forms, one for article, two for singular/plural and two for pronouns) according to my marking. After electronically checked by the programme, five out of these eight errors were corrected exactly in the same way as I had done. However, there was no indication of one instance of a singular/plural

Teacher's correction	Write & Improve
S/P (I've a great new)	Ignored
VF (I heared)	✓ (unusual ending)
VT (He said it'll be easy)	Ignored
VF (to won)	✓ (word form)
Art. (reading at the school)	 ✓ (suspicious word)
Pr. (The scooter it is)	Ignored
Pr. (because ^ is easy)	✓ (missing word)
S/P (This days)	✓ (agreement)

As regards the story submitted, it was 186 words long and had eight errors according to my marking (four for verb tense, two for verb forms and two for pronouns). This time, the two cases of verb form errors were spotted by the site but coded as 'wrong words'. Besides, all the instances of verb tense errors were highlighted as part of a whole sentence that should be checked, which means that there was not guidance as regards the error in particular. So, students should be compelled to make a deeper analysis of the whole clause and try to discover by themselves what could possibly the error be. Finally, while one pronoun error was marked as 'suspicious words', the other instance of the same error was not particularly highlighted.

Teacher's correction	Write & Improve
VT (my friend organised a party	No specific feedback provided.
in which we have to go)	
VF (didn't knew)	\checkmark (word form)
VT (we dance and talked a lot)	No specific feedback provided.
VF (he wanted to knew)	\checkmark (word form)
VT (he continue talking)	No specific feedback provided.
PR (I asked he)	No specific feedback provided.
PR (to see he)	✓ (suspicious word)
VT (his parents told me that he	No specific feedback provided.
died two years ago)	

Finally, I submitted a 190-word essay with ten errors according to my marking (one for article, three for verb tenses, two for singular/plural, one for pronoun, one for subject/verb agreement, one for word form and one for verb form). Out of ten errors, only the instances of article, word form and verb tense errors were identified in particular by the website providing general information about what the problem could have been. Other six errors were marked as part of whole sentences in need of revision, and one mistake was not highlighted at all.

Teacher's correction	Write & Improve		
VT (Personally I believe wildlife had changed	No specific feedback provided.		
to survive) * <i>Reference to a present situation</i>			
Art. (but the action of the human)	✓ (suspicious word)		
* Reference to 'human beings'			
S/P (but the action of the human)	No specific feedback provided.		
*Reference to 'human beings'			
VT (the action of the human had transformed)	No specific feedback provided.		
*Reference to a present situation			
PR (^ is true that some animals)	Ignored.		
S/V (nature choose what animals)	No specific feedback provided.		
S/P (human made continuously)	No specific feedback provided.		
*Reference to 'human beings'			
VT (animals are in danger and human made	 ✓ (suspicious word) 		
continuous ly)			
WF (made continuously changes)	✓ (suspicious word)		
VF (we should made something)	No specific feedback provided.		

Apparently, there is no possible explanation for the omission of feedback for certain types of errors. In the instances mentioned above there is no pattern to understand why some errors are not highlighted while others are. One possible explanation could be that they belong to the specific margin of error automatized in the website. As Hyland explains (2006, p. 120) computers may act just as "surrogate tutors" that provide certain feedback according to "pre-programmed tasks" within a specific error margin. When these instances occur, students are forced to make a greater effort and analyse the whole sentence structure to identify the problem, which is also fruitful, although too challenging for lower level students.

To sum up, *Write & Improve* cannot be described as a completely reliable tool as regards the range of available identification for every occurring error. However, the chance it gives to students to re-submit their work once the errors have been corrected and to receive feedback again on the second, edited draft makes it a valuable tool on its own. As Hedge (1998) puts it, we should always foster the "process of improving", for which we must insist on helping students develop "redrafting and editing strategies" throughout the three stages of writing: thinking, writing and correction. More often than not, students (and teachers) neglect the first and third stages and focus solely on the second. Furthermore, electronic feedback tools like *Write & Improve* might constitute a useful and appealing complementary methods, especially for teenagers and young adults since, as Hyland (2002, p. 121) suggests, teachers should "take advantage of the available software" in the best way possible.

So as to address my second question about which type of feedback, written or electronic, students might prefer, I carried out an exploratory survey among the fifteen participants of this study and I also included fifteen more students with similar level of language proficiency from the same language institution. The thirty students are used to receiving feedback form their teachers but they are also frequent users of the *Write & Improve* programme. The same question was given for every student: "What do you prefer: receiving corrections from your teacher, receiving instant electronic feedback from the *Write & Improve* website, of a combination of both methods?"

Several interesting answers arose which are worth of a preliminary analysis. Most of the students, nineteen to be more precise (63.34%), preferred a combination of both types of feedback; five students (16.66%) preferred teacher's feedback only; and six students (20%) preferred electronic feedback only.

Those students who are in favour of receiving teacher's feedback said that they "can cross out words and add ideas on the margins" or "intervene" the texts. Some of them also said they "concentrate better when writing on paper" or "write faster". Students who prefer electronic feedback from the website argued that "they don't pay attention to feedback on paper", that "it's easier to remember what they have just written" and that they "are more aware of the mistakes". Some others just said they "feel more comfortable" because they can "use their own computers or smart phones".

Those who prefer a combined approach by receiving both types of feedback claimed that they "like instant feedback but the website can't correct everything and has its flaws" or that "the website highlights their mistakes and the teacher guides them to correct them". Along the same line a student said that "instant electronic correction is good to spot the biggest problems, and the teacher can answer all her questions later". Other interesting answers were: "*Write & Improve* is faster, but I like to have the teachers' comments on paper and ask her if I have doubts"; "*Write & Improve* is confusing sometimes so the teacher helps me clarify my doubts"; "*Write & Improve* is more comfortable, but the teacher's corrections are more useful"; "Instant feedback of basic mistakes is great. Then, the teacher can tell me if I am improving

and make suggestions"; "Write & Improve is more challenging and your ideas are still fresh, but I need the teacher to help me with the things Write & Improve doesn't check"; "I can have instant corrections but the teacher's corrections are more profound and she can give me her point of view and guide me to improve the writing".

Those answers are truly interesting to reflect upon, as they show a high level of selfawareness on issues related with corrective feedback on the part of the students. Moreover, they have triggered my own understanding of what error treatment should be about. It needs to be seen as a two-way process between teacher and learner. Thus, it would seem reasonable that decision-making must also be a two-way process and that any decision about giving WCF should always consider what the learners expect. As Bitchener and Ferris (2002, p. 132) put it, "if learners buy into an approach that teachers have negotiated with them, they may be more likely to engage in the feedback process" and, as a result, be more effective users of the feedback they receive.

The purpose of this chapter has been to highlight ways in which error treatment can be made truly useful for addressing issues of linguistic accuracy in student writing. Studies of error correction in writing often highlight only teacher feedback as a means to help students improve the clarity of their writing. However, when teacher feedback is combined with strategy training, peer-correction and electronic feedback, it can provide a comprehensive approach that addresses "different needs and individual learning styles" and that leads students toward the ultimate goal of "independent self-editing and improved overall writing" (Ferris, 2011, p. 151).

Chapter 6: Conclusions, limitations and suggestions for further research

Despite the positive value that the findings obtained in this study might show, several important limitations need to be acknowledged. First of all, because of the difficulty in accessing participants over an extensive period of time, the sample size was smaller than what would have been necessary so as to communicate results on a more solid ground. That is why I have highlighted the exploratory nature of this study throughout. Moreover, and because of the same reasons, statistical data (e.g., exact p-values, effect sizes, etc.) have not been reported. Needless to say, it is very likely that I could have missed, not counted or provided wrong feedback, code or location to errors in students' texts on several occasions. As a result, findings are truly preliminary as far as their validity is concerned. Finally, because of scope and length restrictions, mediating individual and contextual factors have not been taken into account, which could have been included in order to provide further explanations to the results obtained. For instance, students' aptitude or motivational factors like language learning goals, self-efficacy beliefs, self-regulatory attitudes, as well as affective and personality factors might explain variations in the engagement of learners with error treatment and corrective feedback practices (Kormos, 2012).

Despite those limitations, this study might be an interesting starting point to trigger promising lines of future research. As already acknowledged in this work, the effect that WCF can cause on different types of error is a missing piece to provide a more thorough analysis of the topic. Furthermore, a more detailed analysis of the effects that the location of the errors can produce on the learner's ability towards selfcorrection has been also highlighted as necessary and perhaps enlightening. In addition, the analysis of the advantages and disadvantages of electronic feedback in comparison with teacher's feedback constitutes another interesting area to explore. Finally, a shift from a focus on the "output or product" arising from the provision of WCF (for example revised texts, as in this study) towards a focus on "the understanding of how learners respond to, process and use the feedback provided" in revised and new pieces of writing has been highlighted as necessary by recent research (Bitchnener & Storch, 2016, p. 128). Studies adopting these aims need to be more longitudinal and include a wider range of data sources, such as questionnaires, interviews, thinking aloud techniques and stimulated recalls.

To conclude, this study is tuned with SLA research indicating that L2 acquisition takes place gradually over time and that errors are an important part of the highly complex developmental process of acquiring the target language. In fact, it has been demonstrated that there is a "U-shaped course of development" (Ellis, 1997) where learners are initially able to use the correct forms, only to regress later, before finally using them according to the target language norms (Doughty & Long, 2003). We cannot expect, however, that a target form will be acquired either immediately or permanently after it has been highlighted through corrective feedback. Even though explicit feedback can play an important role in L2 acquisition, it needs time and repetition before it can help learners to "notice correct forms, compare these with their own interlanguage and test their hypotheses about the target language" (Hyland & Hyland, 2006, p. 79). Attempting to establish a direct relationship between corrective feedback and successful acquisition of a form is, therefore, oversimplistic and highly problematic.

Lastly, I believe that this research can expand our understanding of how WCF can contribute more effectively to L2 development and might be of potential interest not only for researchers but also for teachers. As Lantolf and Thorne (2007) conclude, research needs to be transformational. My ultimate goal has been, then, to enlighten myself through reflection upon theory and research in order to transform my teaching practice.

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Appendix 1

1. Students' sample texts

Feedback Type: Direct Feedback

Task 2: Story

First draft



Second draft

It was a dark right, and it was raining very hard outside. My Friend Harry and I were watching a horror novie on Suddenly , we heard a noi at home. compro From the basement. My Friend Harry sound that we'd better we check it out, to at ching "the film. continue u We. courage and we u instairs. To our surprise Robts OF the basement veren't worken very well desided to leave Harry These. and I Storic get a candle. But, L Meo I returned Harry wasa't se be was gone. I was very frightened, and my Friend I decided + FOL HOLL stories to wa BUT, when I going up the starrs, the wood of one step was rotten. So WO.S. I cell on the floor and I started to should and be couse I was so scared Whele I up I could heard loughs that 5 Cry SOD that my father kept in the From Some Since I up stenzag the loughs I was u -ino very Slor raise. When I arrived to the to didn't make any ad I could see that were my Friends there, and they made a joke to me.

Feedback Type: Indirect coded feedback with error location

Task 3: Essay

First draft

Many people says online friendships aren't a substitute for real triends. Since technology has been getting faster and simple we can see people which is living thousands of kilometres away with just a few "touchs" on our nobile phone. What's more, it gives you the possibility to commente with your family and friends so you are keep up with the prest information in just a minute. But the problem of this is that when you abuse of this you stop paying stention on real life things. In the other hand, kids maybe not a formate about the risks of social pages because you meet people you about know that cen put in clanger your life. SIV VE la conclusion, online friendships has his adventages like meet people from other places but it may distracted you of the polvice to their kids about the risks of online friendships.

Second draft

Many people say online friendships arent a substitute for real fiends Since the technology has been getting faster and simpler we can see people who are hving thasands of perlometres away from is with just a few tarches" on our mobile phone. Also, it gives you the possibility to commente with your family and fireids so you can keep up with the latest information in just a minute. But the problem is that when you abuse of this you stop paying attention to the things that a happens anound you It kids are not informate about the risks of social metauorks they can meet people they don't know and put in danger their life. In conclusion, online fierdships has its advantages like meeting people from other places but it might distract Vyou from the importance of real fiends. On the other hand, parents should give more advice to them kids about the risks of online friendships.

Feedback Type: Indirect coded feedback without error location

Task 1: Letter

First draft

H? Luca do CONS. VT OUC in? T VT \$ 36 VF/WF to SPI Q VESU arto PR Fringe . Cc PR me PE CACO. 4 25 years 112311 .000. ·Art Pecause. 26 USE CON orcucles transe of we a 09.00 e same we eoole do pollution. w 2400 VF . omole ODSCR INOC. We conjurter to my cousen. UCS nowe. Write soon and let me know your oppin Tokle care,

Second draft

He Lucy! Finally I have decided to travel to London, and you don't know what! I'm here with my cousin Andrea. I come here to do a curse about English language and of couse, to usit my cousin that I didn't t See for 5 years. She'rs a very Friendly and quiet person. She is lovely totalk to, and she is agreement with the protection of environment. Andrea. is very good - looking, she goes to the gym every day of the week. She has got very long and straight hair, and the has highlights in her hair. Last week she made a Fringe, and Looks great. Behind the Fringe, she had a center parting. She isn't so tall or so short, she is medium height. On her face has a lot of Freckles and her eyelashes one very long. She is 25 years old, but she looks like 18. Because Andrea 75 a member of green-peace, we don't use cars of motorcycles. IF we have to go to the center, we use a pulpic transpo or we go on Foot. I thank that ar many people do the same, we can reduce the pollution in the atmosphere. I'll probably do this, when I return to Argenting. Here is you don't recycle the subbish, you have to pay a Fire. I'm completely agree with that idea. Ok lincy! I have to give the computer to my cousin. Write soon, and let me know your oppinion. lake case,

2. Writing Tasks

Task 1: Letters

OPTION 1

You are on holiday at your friend's holiday home. Write a letter to your cousin In Australia, giving a brief description of the house and letting him know what you holiday has been so far.

Write your letter.

1

OPTION 2

You entered a competition and won the first prize- a scooter. Write a letter to a penfriend describing how you entered the competition and the prize you won.

Write your letter.

OPTION 3

You have decided to do a course in London and are staying with your cousin. Write a letter to a friend describing your cousin and telling him/her about the changes in your life.

Write your letter.

OPTION 4

You have received a letter form a friend inviting you to go camping. Write your answer telling him which would be a go place to go and what he should bring.

Write your letter.

OPTION 5

You have just organised a surprise birthday party for your mother. Write a letter to a friend describing what kind of party you organised, who were the guests and how it went.

Write your letter.

OPTION 6

You have just invited an English-speaking friend to stay at your house for a couple of weeks. Write him giving him some basic instructions about how to get to your house from the airport, what would be the best method of transport for him and what clothes he should pack for his stay.

Write your letter.

Task 2: Stories

OPTION 1

A teenage magazine has organised a short story competition. The competition rules say that the story must end with the following words:

It was a night I will never forget Write your **story** for the competition.

OPTION 2

A teenage magazine has organised a short story competition. The competition rules say that the story must **begin or** end with the following words:

It was certainly the strangest thing that had ever happened to him/her. Write your **story** for the competition.

OPTION 3

A travel company is organising a short story competition. To enter the competition you have to write a story about an exciting journey. The story must **begin** like this:

Rebecca knew from the beginning that this would be a journey to remember. Write your **story** for the competition.

OPTION 4

A teenage magazine has organised a short story competition. The competition rules say that the story must **begin** with the following words:

When I was quite young I did something silly one day. Write your **story** for the competition.

OPTION 5

A teenage magazine has organised a short story competition. The competition rules say that the story must **begin** with the following words:

As the plane took off, I wondered who would be waiting for me when I landed. Write your **story** for the competition.

OPTION 6

A teenage magazine has organised a short story competition. The competition rules say that the story must end with the following words:

It was a dark night and it was raining very hard outside. Write your **story** for the competition.

Task 3: Essays

OPTION 1

Online Friendship will never substitute real friends. Do you agree? Write about:

- * The use of technology.
- * Spending time with friends and family.
- * (.....) Your own idea.

Write your essay.

OPTION 2

Not enough is done to protect endangered animals. Do you agree? Write about:

- * Animals kept in zoos.
- * Illegal hunting
- * (.....) Your own idea.

Write your essay.

OPTION 3

There is far too much sport on TV nowadays. Do you agree? Write about:

- * Sport Channels.
- * Other TV programmes.
- * (.....) Your own idea.

Write your essay.

OPTION 4

Having parents as teachers is as good as having real teachers. Do you agree? Write about:

- * Parents' authority.
- * Social life.
- * (.....) Your own idea.

Write your essay.

OPTION 5

Cities should encourage environmentally-friendly tourism. Do you agree? Write about:

- * Benefits for local people.
- * Pollution.
- * (.....) Your own idea.

Write your essay.

OPTION 6

Learning a foreign language is very useful for young people. Do you agree? Write about:

- * Travelling.
- * Future jobs.
- * (.....) Your own idea.

Write your essay.

OPTION 7

Tourism can destroy the environment. Do you agree? Write about:

- * Ways of travelling.
- * Rubbish.
- * (.....) Your own idea.

Write your **essay**.